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COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAI'I

PETITION TO AMEND INTERIM INSTREAM FLOW STANDARDS FOR HONOPOU, HUELO (PUOLUA), HANEHOI, WAIKAMOI, ALO, WAHINEPEE, PUOHOKAMOA, HAIPUAENA, PUNALAU/KOLEA, HONOMANU, NUAAILUA, PIINAAU, PALAUHULU, 'ŌHI'A (WAIANU), WAIOKAMILO, KUALANI, WAILUANUI, WEST WAILUAIKI, EAST WAILUAIKI, KOPILIULA, PUAKAA, WAIOHUE, PAAKEA, WAIAAKA, KAPAULA, HANAWI and MAKAPIPI STREAMS	CASE NO. CCH-MA13-01 PETITIONERS' OPENING STATEMENT AND BRIEF; CERTIFICATE OF SERVICE

PETITIONERS' OPENING STATEMENT AND BRIEF

Nā Moku Aupuni o Ko`olau Hui, Lurlyn Scott, and Sanford Kekahuna, by and through their counsel, hereby file this Opening Statement and Brief pursuant to Minute Order 12.

I. INTRODUCTION

Nā Moku Aupuni o Ko`olau Hui, a 501(c)(3) non-profit organization whose membership consists of the lineal descendants of the original inhabitants and current tenants of the ahupua'a of Ke`anae and Wailuanui, East Maui, together with Lurlyn Scott

and Sanford Kekahuna, the immediate surviving descendants of and substituted parties for the now deceased Beatrice Kekahuna and Marjorie Wallet from Honopou (collectively hereinafter "Nā Moku" or "Petitioners"), originally petitioned the Commission on Water Resource Management ("CWRM" or "Commission") on May 24, 2001 to amend the interim instream flow standards ("IIFS") for 27 East Maui streams.

Thirteen years ago, they sought simply to protect their constitutionally protected traditional and customary native Hawaiian rights. They and their ancestors have farmed taro since ancient times, mauka to makai, along the auwai and lo`i kalo of East Maui, and into the muliwai where waters from the lo`i system discharge and meet the ocean. The rights to gather in and around East Maui streams and estuaries, to cultivate taro, and to engage in the myriad practices reliant on public trust resources for religious, cultural, and subsistence purposes are rights recognized in our state constitution and statutes and safeguarded as public trust purposes under the Water Code.

Notwithstanding these clear legal imperatives, the private use of water by Alexander & Baldwin, Inc. ("A&B") and East Maui Irrigation Company, Ltd. ("EMI") (collectively hereinafter, "A&B/EMI") have wreaked havoc in East Maui, injuring and unreasonably interfering with Nā Moku's superior rights to the State's water resources. While this longstanding injustice springs from A&B/EMI's century old practice of diverting stream water flowing across 33,000 acres of historic crown lands in East Maui to enrich its commercial enterprise in Central Maui, the State has been all too eager to accommodate those diversions. The Commission has ample sound information on which to amend the IIFSs for all 27 East Maui streams in a manner consistent with its duty to protect and promote the public trust. If after thirteen years the Commission cannot afford to duly monitor or enforce IIFSs for all 27 East Maui streams in conformity with public trust principles and constitutionally protected water rights, then it cannot afford to permit these public trust resources to be eroded any further by diversions.

II. BACKGROUND SUMMARY

A. The Physical Landscape and Watershed - 27 East Maui Streams

Nā Moku's 27 Petitions to Amend the IIFS concern 27 streams contained within the following 21 surface water hydrologic units in East Maui: HONOPOU (6034); HANEHOI (6037): Hanehoi and Puolua (Huelo) Streams; PIINAAU (6053): Piinaau and

Palauhulu Streams; WAIOKAMILO (6055): Waiokamilo and Kualani Streams; WAILUANUI (6056): East/West Wailuanui Streams and Waikani Waterfall[1] WAIKAMOI (6047): Waikamoi, Alo, and Wahinepee Streams; PUOHOKAMOA (6048); HAIPUAENA (6049); PUNALAU (6050): Punalau/Kolea Stream; HONOMANU (6051); NUAAILUA (6052); OHIA (6054): Ohia (Waianu) Stream; WEST WAILUAIKI (6057); EAST WAILUAIKI (6058); KOPILIULA (6059): Kopiliula and Puakaa Streams; WAIOHUE (6060); PAAKEA (6061); WAIAAKA (6062); KAPAULA (6063); HANAWI (6064); and MAKAPIPI (6065). *See* CWRM Submittal (9/24/08) at 1-2; CWRM Submittal (5/25/10) at 1-2. The streams and their hydrologic units span two of the twelve moku or districts on Maui Island: Hāmākua Loa and Ko`olau, which are situated between the moku of Hāmākua poko and Hana. Declaration ("Decl.") of Ty Kawika Tengan at ¶16.

Three of the subject streams covering two hydrologic units, Honopou, Huelo (Puolua), and Hanehoi, fall within the Hāmākua loa district. *Id.* The remaining streams in 19 hydrologic units fall within the Ko`olau moku, beginning with Waikamoi and ending at Makapipi Stream. Separating the two moku is O`opuola gulch. *Id.* at ¶23.

Eight of the petitioned streams feed directly into lo`i and auwai systems located in the historic taro-growing areas of Honopou, Hanehoi, and Keanae-Wailuanui, which by the CWRM's estimates once boasted approximately 496-acres of taro nourished by Honopou, Hanehoi, Puolua, Piinaau, Palauhulu, Waiokamilo, Kualani, and East and West Wailuanui Streams.[2] The other streams and areas support variegated instream uses that include small lo`i terraces, fishing, traditional cultural gathering practices, and recreational activities. Regarding the Hamakua-Ko`olau region, Kepa Maly reported:

> For generations following initial settlement, communities were clustered along the watered,windward (ko'olau) shores of the Hawaiian Islands. Along the ko'olau slopes, streams flowed and rainfall was abundant, and agricultural production became established. The ko'olau region also offered sheltered bays from which deep sea fisheries could be easily accessed, and near shore fisheries, enriched by

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[1] The Commission decided to address and consolidate the Petition to Amend IIFS for Waikani Waterfall (Stream) with the Petition to Amend IIFS for East and West Wailuanui Streams. *See* CWRM Submittal (9/24/08) at 2, n.1.

[2] *See* Instream Flow Standard Assessment Report ("IFSAR"), Island of Maui, Hydrologic Unit ("HU") 6034, Honopou (March 2008) at 66; IFSAR for HU 6037 at 61; IFSAR for HU 6053 at 72; IFSAR for HU 6055 at 66-67 (the sum total of taro acreage as reported by CWRM in its IFS Assessment Reports for the Honopou, Hanehoi, Piinaau, Waiokamilo, and Wailuanui hydrologic units in East Maui).

> nutrients carried in the fresh water, could be maintained in fishponds and coastal fisheries. It was around these bays that clusters of houses where families lived, could be found, and in these early times, the residents generally engaged in subsistence practices in the forms of agriculture and fishing.

Tengan Decl. at ¶25. The two moku are both included in the larger region known as known as Maui Hikina, East Maui, each having unique characteristics. *Id.* at ¶16.

HAMAKUALOA

Hamakualoa is described as follows by firsthand accounts during the 1930s-1950s after the water diversions were in place:

> Two kama'āina at Ke`anae said that there were small lo`i developments watered by Ho`olawa, Waipi`o, Hanehoi, Hoalua, Kailua, and Na`ili`ilihaele Streams, all of which flow in deep gulches. Stream taro was probably planted along the watercourses well up into the higher kula land and forest taro throughout the lower forest zone. The number of very narrow ahupua`a thus utilized along the whole of the Hāmākua coast indicates there must have been a very considerable population. This would be despite the fact that it is an area of only moderate precipitation because of being too low to draw rain out of trade winds flowing down the coast from the rugged and wet northeast Ko`olau area that lies beyond. It was probably a favorable region for breadfruit, banana, sugar cane, arrowroot; and for yams and 'awa in the interior. The slopes between gulches were covered with good soil, excellent for sweet potato planting. The low coast is indented by a number of small bays offering good opportunity for fishing.

Id. ¶19. Native testimony indicates "there are many lo`i [in Honopou]." *Id.* ¶20.

KO`OLAU

The Ko`olau region of Maui has been described as the "wettest coastal region in all the islands." *Id.* ¶22. Wailuanui and Keanae are described as follows:

> On the northeast flank of the great volcanic dome of Haleakalā...the two adjacent areas of Ke`anae and Wailua-nui comprise the fourth of the main Maui centers and the chief center on this rugged eastern coast. It supported intensive and extensive wet-taro cultivation. Further eastward and southward along this windward coast line is the district of Hana, the fifth great center[.]

Tengan Decl. ¶24. Waikamoi, Puohokamoa, and Haipuaena watered small lo`i areas. *See id.*¶ 26. "Honomanu, a large stream with a broad deep valley at its seaward end and a good beach for fishing canoes and gear, facing its broad bay. Anciently Honomanu supported a large population. Old terraces run back into the valley as far as the level land goes[.]" *Id.* ¶27. "Just beyond Honomanu is Nu'uailua [Nu'a'ailua], flat bottomed like

Honomanu but smaller. Terraces cover the flatlands and much taro was formerly raised, watered by an ample stream; but the valley has long been uninhabited." *Id.* ¶28.

Ke`anae "is a unique wet-taro growing ahupua`a." *Id.* ¶29. "It is on the broad flat peninsula of lava extending for about a half a mile into the sea from the western line of the valley that Ke`anae's famed taro patches are spread out -- striking evidence of old Hawaii's ingenuity." *Id.*

Beyond Ke`anae "is a sizable bay formed by erosion where three streams flow into the ocean. . . . About half the gently sloping land seaward of the cliff was terraced with lo'i which were watered by Wailuanui (Big Wailua) Stream, the larger of the three that flow into the bay." *Id.* "Wailua has been notable for its continued occupancy and cultivation by Hawaiian families." *Id.* ¶32.

Beyond Wailuanui "there are a succession of small deep gulches, each one having a few lo'i: East Wailuaiki and West Wailuaiki (Little Wailua), Kapili`ula [Kopili`ula], Waiohue, Pa`akea, Kapa`ula, Hanawi. Then comes Nahiku, a settlement spread over gently rising ground above the shore, with a number of groups of lo'i watered from Makapipi Stream." *Id.* ¶33.

Nā Moku depends directly upon the same East Maui stream waters for their traditional subsistence gathering, fishing, and agricultural needs in Hamakualoa and Ko`olau, which are themselves historic population centers well-known for supporting intensive and extensive wet-taro cultivation. *See id.* ¶24; Exhibit A-1 (*Chart Re: Declarant*s' *T&C Practices By Stream*)

B. The Cultural Landscape

The naming of different landmarks and areas was critical to preserving the knowledge of the inhabitants of the different areas. As described by anthropologist Ty P. Kawika Tengan,

> [i]n general, Native Hawaiian spiritual tenets and beliefs are expressed and perpetuated in their relationship to each other and to their *kulāiwi* (native land). The naming of winds, rains, landmarks, and waters perpetuate the traditional knowledge that the inhabitants developed of these areas and their resources over centuries of cultivation and habitation.

Tengan Decl. ¶12. The Hamakua-Ko`olau region, with its rugged shoreline and steep cliffs and valleys, is an area with deep connections to traditional cultural practices. "The

famous Alaloa or alanui that circled the island was created by the high chief Kiha-a-Pi`ilani (or Kihapi`ilani) after securing his rule over Maui." *Id.* ¶21. Tengan describes the significance of the alanui as follows:

> In *Ka Nupepa Kuokoa*, August 23, 1884, Moses Manu related that after paving sections of the trail in different parts of the island, Kihapi'ilani "began the paving in the forest of 'O'opuloa [i.e., 'O'opuola], at Ko'olau, extending from Kawahinepe'e to Kaloa, then on to Pāpa'a'ea, and on to Ka'ohekanu at Hāmākua Loa" (translation and emphasis by Maly in *Wai O Ke Ola*, Volume 1 at 27). Abraham Fornander (1996:206) also noted that Kihapi'ilani "kept peace and order in the country, encouraged agriculture, and improved and caused to be paved the difficult and often dangerous roads over the Palis of Kaupo, Hana, and Koolau—a stupendous work for those times, the remains of which may still be seen in many places, and are pointed out as the "Kipapa of Kihapiilani" (cited in Maly, *Wai O Ke Ola*, Volume 1 at 28). The trail was significant because it created an interconnected cultural and historical landscape where customary practices of gathering, farming, exchange, and travel could be conducted from Hāmākua Loa to Ko'olau and beyond.

Id. (Emphases added).

Fresh spring water "is an important element in Hawaiian spirituality" and, as such is, found in legends of the first inhabitants who are "remembered as akua 'gods' for their capacity to endow nature with cultural features and 'create' society." Tengan Decl. ¶13. The uplands of Ke`anae, for example, are one area in which the gods Kane and Kanaloa establish a spring of water.[3] Group 70 International, Inc., et al., *Kalo Kanu o Ka `Āina, A Cultural Landscape Study of Ke`anae and Wailuanui*, Island of Maui (July 1995) ("*Kalo Kanu O Ka `Āina*") at 21. One such spring was created in Waianu at Ōhi'a, which was said to irrigate lo`i. Tengan Decl. ¶30; *see also* Decl. of Kaui Kanakaole ¶39. According to kumu hula and educator Kaui Kanakaole, this spring was "special, sacred, kapu (taboo) and only to be used in unique circumstances." Kanakaole Decl. ¶40. Other legends include stories of sharks and shark-men which "speak of reciprocity -- the exchange of foodstuffs between Ke`anae folk working the land and the sea -- necessary for the maintenance of life in the *ahupuaa* and of the consequences when the exchange

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[3] Tengan notes the importance of the akua as follows, "Kāne and Kanaloa were two of the four primary akua in the Hawaiian pantheon; Kāne was associated with fresh water and taro, and Kanaloa with the ocean and fishing....Kāne and Kanaloa are known to have introduced the ritual, social, and medicinal use of drinking 'awa (kava), a drink that requires the waters of Kane." Tengan Decl. ¶14.

relationship is not respected." *Kalo Kanu o Ka `Āina* at 22; *see also* Kanakaole Decl. ¶¶20, 26-27. According to Davianna Pōmaika`i McGregor, Ph.D.,

> the land use patterns of the Ke`anae-Wailuanui region have been shaped by Hawaiian cultural mores and practices. The `ohana values and practices of the community stress conservation of the natural resources for the benefit of present and future generations. Rules of behavior are based on respect of the `aina, the virtue of sharing, and a holistic perspective of organisms and ecosystems that emphasize balance and coexistence. The Hawaiian outlook which shapes these customs and practices is lokahi or maintaining spiritual, cultural, and physical balance with nature. In the course of their travels throughout the various `ili of the traditional cultural practices region, practitioners of Ke`anae and Wailuanui are able to renew their knowledge and understanding of the landscape, the place names, names of the winds and the rains, traditional legends, wahi pana, historical cultural sites, and the locations of various plants and animals. The region is thus experienced as part of their `ohana, necessitating the same care as would a member of their family.

Decl. of Davianna McGregor, Exhibit A[4] at 11.

Tengan recounts the legendary story of Laukaieie who travels from Nahiku to Ho`olawa (adjacent to Honopou) noting different aspects of the landscapce as she passes through, noting that the story "provides an abundance of rich cultural information about the Ko`olau-Hamakua region and its traditional and customary practices." Tengan Decl. ¶35. He notes that, "what emerges from [Laukaieie's] journey is the significance of pahtways, those on land or sea, through caves or streams, for connecting the gods, land, and people in an integrated cultural landscape. At the core of this, free flowing water is central for creating abundance, life, and growth in the region." *Id.*

Testimony from the Māhele proceedings in the mid-1800s "reveal locations, boundaries, land usages, place names, length of occupancy - all indicating complex relationships to the land." *Kalo Kanu o Ka `Āina* at 25. Although much of the land in the primary occupied areas of Ke`anae and Wailuanui were retained by the Crown at that time, tenants claimed a total of 490 lo`i of various sizes just in Ke`anae and Wailuanui alone. *Id.* Royal Patent grants issued after the Māhele expanded the land ownership in the areas, primarily held collectively as *hui* lands. *Id.* at 26. Just prior to the turn of the century, the Land Act of 1895, created an opportunity for more residents to create

[4] "Exhibit A" to the Decl. of Davianna McGregor is a copy of her direct expert testimony filed in the contested case hearing docket DLNR File No. 01-05-MA. As such, it has been incorporated into her declaration as testimony and is excluded from Nā Moku's Exhibit List.

homestead parcels from government land in Ke`anae and Wailuanui to include one wetland lot in addition to a houselot and required that the land be cultivated. Act of August 14, 1895, §§ 235, 237.[5] This land tenure history forms the basis for current calculations of acreage used for taro farming in these areas in particular. *See* Decl. of Teresa "Teri" Gomes ¶¶74, 120, 173, 252, 272, 280, 285, Exhibits A-2 – A-136. *See also Kalo Kanu o Ka `Āina* at 25; Maly, *Wai O Ke Ola*, Vol. 1 at 85-90.

McGregor studied the Ko`olau area extensively, primarily focusing on the population center of Ke`anae-Wailuanui. McGregor Decl., Exhibit A at 3-5. McGregor describes the Ke`anae-Wailuanui region as a "cultural kipuka," defined as "places where Hawaiians have maintained a close relationship to the land through their livelihoods and customs - that play a vital role in the survival of Hawaiian culture as a whole." McGregor Decl., Exhibit A at 17. Cultural kipuka are "essential for the perpetuation of Hawaiian culture" and yet, she notes that their survival is "continually eroded by an ever increasing lack of water." *Id.*

The dewatering of the streams that threatens the survival of Hawaiian traditional and customary practices is particularly oppressive for wetland taro farmers, who require 100,000 to 300,000 gallons per acre per day (gad). *See* Decl. of Paul Reppun, Exhibit A[6] at 5-6, 11 (explaining that the gad range presumes "new" water or "water that has not been warmed up by previous use"). According to Reppun, the range of gad values reflects the minimum amount of water needed to flow through the lo`i and exit at 77 degrees – "the temperature that everyone seems to agree is the critical temperature needed in growing taro" to avoid pythium rot - and other variables affecting taro farming (*e.g.*, "percolation rates, weather, season, location on the stream relative to other diversions, initial water temperature, and rate of dilution of used water"). *Id.* at 5-6 (noting importantly "that there are times when the taro farmer must use the maximum amount and that needs to be taken into account when determining how much water is required"). Given that initial water temperatures and water levels affect water use, "[a] farmer who

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[5] The Land Act of 1895, enacted August 14, 1895, was the short title for an act that amended several laws that formally merged Crown Lands with Government Lands and declared that the "Public Lands" would be alienable. Jon M. Van Dyke, *Who Owns the Crown Lands?* (2008) at 192.

[6] "Exhibit A" to the Decl. of Paul Reppun is a copy of his direct expert testimony filed in the contested case hearing docket DLNR File No. 01-05-MA. As such, it has been incorporated into his declaration as testimony and is excluded from Nā Moku's Exhibit List.

uses water downstream of where an upstream user returns water to the stream must use more water because he starts with warmer water." *Id.* at 5 (acknowledging that "[m]ore water in the stream means lower temperatures"). Thus, "water quantity and quality in terms of temperature" -- conditions eroded by the diversions -- are absolutely critical to perpetuate wetland taro farming practices in this historic taro-growing area. *See id.* at 2.

Consistent with historical accounts, McGregor reports that, "Wetland taro cultivation is the most important single component of the cultural landscape of Ke`anae-Wailuanui." McGregor Decl., Exhibit A at 7. She describes the area in further detail:

> There are five major locations of active taro cultivation – Ke`anae peninsula, Wailuanui, Ke`anae Arboretum, Waianu Valley, and Lakini. An additional small area of cultivation exists at Waiokamilo Stream just Makai of its crossing of Wailuanui Road. There are small lo`i on both sides of the stream. In addition, throughout the district old taro terraces can be found and taro still grows in the wild in the valleys, along streams. Informants speak of going out and gathering lu`au leaves from the wild taro because it has a good flavor, distinct from the cultivated varieties. Some of the areas for the gathering of wild lu`au include Pi`ina`au, Nua`ailua, Kupa`u, Waipi`o, Pohole and Pāhoa.

McGregor Decl., Exhibit A at 8. McGregor also reports that the reduction in taro production from the 1800's to the time of her study was "significant compared to historic levels." *Id.* Nonetheless, Nā Moku farmers and area residents continue to raise kalo in the historic lo`i fed by Honopou, Waiokamilo, Wailua, Piinaau, and Palauhulu. *See* Gomes Decl. at ¶¶74, 120, 173, 252, 280, 285; Exhibit A-137 (*Spreadsheet Re: Land Title History for East Maui Lo`i Parcels*) (documenting 146.75 cultivable acres of taro in these historic lo`i areas). *See also* Exhibit A-1. Lurlyn Scott, for example, farms kalo in Honopou lo`i previously tended to by her mother, Marjorie Wallett, and other members of her family. Decl. of Lurlyn Scott ¶¶15, 17. *See* Exhibit A-138 (*Honopou Lo`i: TMK (2) 2-9-01*), A-139 (*Honopou Lo`i: TMK (2) 2-9-14*). Isaac Kanoa farms land in Keanae and Waianu to feed his family and teach his children, his son-in-law, and his grandchildren the traditions his father taught him. Decl. of Isaac Kanoa ¶¶5-6, 12. *See* Exhibits A-140 (*Ke`anae Loi: TMK (2) 1-1-03*), A-141 (*Waianu Lo`i, TMK (2) 1-1-07).* Nā Moku president Edward Wendt has been in Wailuanui for six generations and still farms on lands that have been in his family since the Māhele. Decl. of Edward Wendt

¶5.[7] *See* Supplemental ("Supp.") Decl. of Ed Wendt ¶6; Exhibit A-142 (*Wailua Lo`i: TMK (2) 1-1-04, -05, -06*). As Nā Moku members recognize, "[y]ou gotta have water to raise taro." Decl. of Harry Hueu ¶23.

The following chart summarizes Nā Moku's estimates of cultivable acreage in taro by area and the corresponding water requirements:

Table No. 1 *Water Requirements for Cultivable Taro Areas*

Area	CWRM Reported Diversion Registered Lo`i	Petitioners' Estimated Cultivable Area[8]	Total Estimated Water Needs for Taro (in addition to 64% baseflow)*
Honopou	34.55[1] acres	26.06 acres[9]	2.61mgd - 7.82mgd
Ke`anae	105.85[2] acres	29.695 acres[10]	2.97mgd - 8.91mgd
Wailua	353.32[3] acres	90.992 acres[11]	9.1mgd - 27.3mgd

1 Instream Flow Standard Assessment Report ("IFSAR"), Island of Maui, Hydrologic Unit 6034, Honopou (March 2008) at 66.
2 IFSAR, Island of Maui, Hydrologic Unit 6053, Piinaau (March 2008) at 72.
3 IFSAR, Island of Maui, Hydrologic Unit 6056, Wailuanui (March 2008) at 72; IFSAR, Island of Maui, Hydrologic Unit 6055, Waiokamilo (March 2008) at 66-67.
**See* Testimony of Paul Reppun as to water requirements for taro estimated at 100,000-300,000 gad.

C. Current Traditional and Customary Practices

In terms of other traditional customary practices, McGregor determined that the residents of Wailuanui-Keanae extended their traditional cultural practices beyond the boundaries of the Keanae-Wailuanui ahupua`a to the surrounding areas, from Honomanu

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[7] Edward Wendt also attests to the leasing of a State-controlled parcel, TMK 1-1-08-05, a portion of the `ili of Kupa`u by Hawaiian lessees. *See* Ed Wendt Supp. Decl. ¶5; Exhibit A-143 (*Wailuanui Lo`i: TMK (2) 1-1-08*). The parcels evidences ancient taro lo`i within their borders. Because the State currently manages it, however, Na Moku has NOT included its acreage in its calculation of cultivable acres in taro.

[8] These calculations are based on the number of acres historically and/or currently used for taro cultivation in the relevant valleys. *See* Gomes Decl. ¶¶ 74, 120, 173, 252, 280, 285. *See also* Exhibit A-137,-138, -139, -140, and -142.

[9] *See* Gomes Decl. ¶¶280, 285; Exhibits A-138 and -139.

[10] *See* Gomes Decl. ¶74; Exhibit A-140.

[11] *See* Gomes Decl. ¶¶120, 173, 252; Exhibit A-142.

in the west to Makapipi in the east. McGregor Decl., Exhibit A at 14. She explains that, "[t]he additional areas used by residents of Ke`anae-Wailuanui depended on where their family ancestors originated and established subsistence practices. The location and distribution of water is the primary determinant of the distribution of natural resources. For example, some families fish and gather as far as Kaupō or as far west as Honopou and mauka to Waikamoi. Traditional land use boundaries were defined in relation to the amount and location of water." *Id.*

Petitioners carry on these traditional customary practices throughout the Hamakua-Ko`olau Region, including gathering ʻōpae, `o`opu, and hīhīwai, in the various streams from Honopou to Makapipi and the streams in between. *See* Exhibit A-1. Awapuhi Carmichael, a kupuna from Keanae, gathers ʻōpae, limu, and opihi in or near the mouths of Piinaau, Palauhulu, ʻŌhiʻa/Waianu, Waiokamilo, Kualani, Wailua, Waikani (Wailuanui), West Wailuaiki, East Wailuaiki, Kopiliula, Puakaa, Paakea, Waiaaka, Kapaula, Hanawi, Waiohue, and Makapipi. Decl. of Awapuhi Carmichael ¶13. Sanford Kekahuna gathers `o`opu, prawns, and small baby fish at the edge of Honopou. Decl. of Sanford Kekahuna ¶11. Lurlyn Scott gathers and fishes "to perpetuate [her] cultural food and traditions so [her] grandchildren will be able to live off the land like our kupuna did." Scott Decl. ¶22. Similarly, Terrance P.K. Akuna "gather[s] and fish[es] to feed [his] family and teach [the] younger generation how we live in such an isolated place without stores. Our streams are our iceboxes." Decl. of Terrance P.K. Akuna ¶13.

Nā Moku fishermen also rely on the entire range of petitioned streams for their fishing practices. *See* Exhibit A-1. For example: (1) Jerome "Junior" Kekiwi fishes for moi, aholehole, anae, papio, and enenue in the ocean fronting his Wailua valley home, which is fed by Honomanu, Nuaailua, Wailua, Waikani (Wailuanui), West Wailuaiki, and East Wailuaiki streams, Decl. of Jerome K. Kekiwi, Jr. ¶11; (2) Darrell Aquino throws net and dives for lobsters, kumu, uhu, kala, palani, aholehole, and moi in or near the mouths of Punalau/Kolea, Honomanu, Nuaailua, Piinaau, Palauhulu, ʻŌhiʻa/Waianu, Waiokamilo, Kualani, Wailua, Waikani (Wailuanui), West Wailuaiki, East Wailuaiki, Kopiliula, Puakaa, Paakea, Waiaaka, Kapaula, Hanawi, Waiohue, and Makapipi, Decl. of Darrell Aquino ¶15; and (3) Jonah Jacintho fishes for enenue, ulua, uhu, haukiuki, opihi, poopaa, omilu, aholehole, lae, aweoweo, and paananui near the mouth of Honopou. Decl.

of Jonah Jacintho (hereinafter "J. Jacintho Decl.") ¶11. According to Norman "Bush" Martin, "[f]ish are dependent on brackish water to spawn." Decl. of Norman "Bush" Martin ¶18. "With twenty-seven streams, there are twenty-seven nurseries." *Id.*

Nā Moku additionally engages in the native Hawaiian traditional and customary practice of mālama ʻāina and mālama kahawai to maintain and "care for" the land and waters from which they gather, fish, recreate, and are nourished. *See* Exhibit A-1. They take care of the resource by clearing the streams, cutting the grass, and removing hau bush, *see* Kekiwi Decl. ¶12; gathering according to the seasons of the moon and in different places to avoid over harvesting *see* Decl. of Healoha Carmichael ¶12; and only taking enough of any one resource to meet their current needs. *See* Decl. of Joseph "Jojo" Young ¶12. Isaac Kanoa actively engages in mālama at Piinaau, Palauhulu, and Waiokamilo by cleaning the ditches and streams and closing some of his patches during droughts to ensure that more water goes to the people below. *See* I. Kanoa Decl. ¶13.

When they are not working in the loʻi, streams, or ocean to feed their families, Nā Moku enjoys the streams for recreation and for their beauty. *See* Exhibit A-1. Healoha Carmichael, for example, enjoys swimming at Ching's Pond at Piinaau. H. Carmichael Decl. ¶13. Juliana Jacintho swims and relaxes near Honopou, enjoys strolling around the stream area, and appreciates the stream as a place where her children are able "to play and run freely, camp, gather, talk, and remember the past." Declaration of Juliana P. Allen Jacintho (hereinafter "JP Jacintho Decl.") ¶9. Lurlyn Scott's children and grandchildren learned to swim at Honopou, and she swims, cliff dives, and enjoys the tranquility at Honopou, Honomanu, Hanawi, and Makapipi. Scott Decl. ¶¶24-25. Jerome "Junior" Kekiwi uses the streams for other purposes, including washing dishes and bathing. Kekiwi Decl. ¶15. Norman "Bush" Martin appreciates the "views, the sounds, and the smells of nature" that he experiences while gathering in the Wailuanui area. Martin Decl. ¶15. "Seeing water in the stream is beauty to me." *Id.* Sanford Kekahuna enjoys the rainfall, the sound of the stream [(Honopou)] by [his] house, the wind, the smell of flowers, and the sound of birds -- they talk." Kekahuna Decl. ¶16. Ed Wendt appreciates viewing and visiting Honomanu, Nuaailua, Piinaau, Palauhulu, ʻOhiʻa/Waianu, Waiokamilo, Kualani, Wailua, Waikani (Wailuanui), West Wailuaiki, and East Wailuaiki. Ed Wendt Decl. ¶13. He and his wife walk up to Waikani

(Wailuanui) waterfall every morning "to enjoy the view and experience the beauty of this area." *Id.*

D. EMI's Diversions and HC&S' Water Uses

EMI, a subsidiary of A&B, operates a system of diversion, intakes, ditches, and tunnels that for over one hundred years stripped the Hamakua-Ko`olau region of their natural streamflows. Today referred to as the Huelo, Honomanu, Keanae, and Nahiku license areas[12], the streams that once flowed through this East Maui wellspring have been plundered primarily to saturate the more than 30,000 acres of sugarcane fields owned by Hawaiian Commercial and Sugar Company (HC&S) in Central Maui. Approximately 165 millions of gallons (mgd) of water from East Maui deluge HC&S's commercial sugar fields on a daily basis. CWRM Submittal (9/24/08) at 11. HC&S purports to use between 5,064 gallons per acre per day (gad) in the wet season and 10,128 gad in the dry season.[13] Even at the lower range of irrigation, the CWRM staff concluded that HC&S' water use was "high"[14] and exceeded ***four times over*** the 1,400 gad to 6,000 gad which the CWRM determined was HC&S' actual need.[15] By that determination, HC&S should be using an average of 72 mgd -- less than half of the reported 164-166 mgd. The difference between what HC&S wastes and what the Commission determined reasonable is 94 mgd.[16]

More than 13 years after Nā Moku requested relief from A&B/EMI's systematic diversion program, Nā Moku estimates that the Commission's IIFS amendments has restored no more than 7.1% (or 12 mgd) of the approximately 166 mgd diverted by

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[12] *See* Exhibit A-144 (*EMI's East Maui Ditch System Map from Nahiku to Maliko*).

[13] In 2005, HC&S agent Lee Jakeway, then in charge of irrigation of HC&S sugar fields, testified to the BLNR hearing officer in a parallel contested case proceeding that HC&S used between 17,724 gallons per acre per day (gad) during the wet season to 34,449 gad during the dry season to irrigate the sugar fields of HC&S. *See* CWRM Submittal (9/24/08) at 8-9.

[14] CWRM Submittal (9/24/08) at 9.

[15] *Id.* (relying on the Irrigation Water Requirement Estimation Decision Support System (IWREDSS) model to calculate HC&S' average irrigation need for sugarcane); CWRM Minutes (9/24/08 – 9/25/08) at 11-12. Although the CWRM noted the admission by HC&S, it merely noted HC&S' *post hoc* rationalization without fully resolving the difference in interpretation.

[16] By comparison, A&B/EMI's delivery of **8.2 mgd** of its diverted East Maui water to the County of Maui for its Upcountry domestic consumers, farmers, and ranchers. *See CWRM Submittal* (9/24/08) at 12. Thus, its ditch system delivers to the County less than **one-tenth** the amount HC&S wastes daily and, like Nā Moku, constitutes a mere fraction of what A&B/EMI diverts from **all** East Maui streams, not just the 27 petitioned streams. Nā Moku has never contested A&B/EMI's delivery of an amount of water sufficient to meet the County's ***actual*** water needs, and the refrain that the ditch system is in service of Maui County is hollow, post hoc justification for A&B/EMI's commercial diversion of public trust resources.

A&B/EMI on any given day during the wet season, and a mere 3.3% (5.53 mgd) during Central Maui's dry season.[17] Yet, the Commission allows A&B/EMI to waste more than that -- despite clear support that the amended IIFS are inadequate to protect Nā Moku's constitutionally guaranteed right to exercise ancient Hawaiian customs and traditions and protected trust purposes that depend on natural East Maui streamflows that are being lost to diversions. *See* Table No. 1, *supra* at 10; Exhibit A-1.

E. The Commission's Prior Flawed Approaches To Setting IIFS

The Commission has ample sound information to inform its setting of amended IIFS in a manner that fulfills its duty to protect and promote the public trust. For nearly a decade, CWRM has partnered with the U.S. Geological Survey ("USGS") and the Department of Land and Natural Resources' ("DLNR's") Division of Aquatic Resources ("DAR") to determine the most desirable IIFS to protect and manage the public trust resources and purposes at stake here. Both agencies have consistently recommended actions that support restoration of native species' habitat and stream animals vital to preserving the resource and integral to the continuation of Native Hawaiian practices and customs, not to mention the qualitative values of recreation and aesthetic beauty – all of which command protection under the law.

1. The USGS and DAR Confirm The Scientific Correlation Between Increased Streamflow And Habitat Availability For All 27 Streams.

In 2005, the USGS published two reports based on the results of a three-year cooperative study with the CWRM to assess streamflow and stream-macrofauna characteristics in East Maui, Hawai'i. Letter fr. S. Gingerich to L. Miike, State-DLNR/CWRM (10/31/14). The first of the two USGS studies entitled, *"Median and Low-Flow Characteristics for Streams under Natural and Diverted Conditions, Northeast Maui, Hawaii,"* Scientific Investigations Report 2004-5262, documented certain stream parameters for the subject streams. *Id.* The second study entitled *"Effects of Surface-Water Diversions on Habitat Availability for Native Macrofauna, Northeast Maui, Hawaii,"* Scientific Investigations Report 2005-5213, modeled the effects of stream flow

[17] *See* Written Testimony of Dean Uyeno (12/18/2014) at 5 (calculated using the total restoration figures in the Chart and the average diversion amount of 167 mgd by HC&S based on figures reported in the CWRM Staff Submittal (5/25/2010) at 15).

restoration on habitat recovery. *Id.* Together, the USGS developed a generalized relation between physical habitat for native species and discharge for East Maui streams. Five streams (Waikamoi, Wailuanui, Kopiliula, and Hanawi Stream) were chosen as a representative sample of the range of hydrologic conditions encountered in the petition area. Letter fr. S. Gingerich to L. Miike (10/31/14). Three native fish species (`alamo`o, nopili, and nakea), hīhīwai, and ʻōpae were observed in sufficient abundance for consideration in the study, which employed habitat selection models to evaluate habitat quality and predict effects of habitat alteration (*e.g.*, different streamflows) on animal populations (by species and life stages). *See id.*

In general, the USGS model results revealed "a decrease in habitat for all species as streamflow is decreased from natural conditions"[18] and conversely that "the addition of even a small amount of water to a dry stream has a significant effect on the amount of habitat available." *See id.* The USGS reports indicated that for diverted streams like Honomanu, the habitat available compared to that expected was zero percent (0 %) and incapable of supporting stream life. *See id.* The science corroborated the diversion's destructive effects, decimating Honomanu's historic capacity for fishing and lo`i terraces that supported a large population prior to the diversions, *see* Maly, *Wai O Ke Ola* at 9. Even just a few generations ago, Honomanu flows supported the gathering of `ʻōpae, watercress, lu`au, hāhā, pepeiao, hīhīwai, pupulo`i and goldfish -- traditional and customary instream uses which had to be abandoned once the stream dirtied and then went dry. A. Carmichael Decl. ¶¶9, 13. The diversions' destructive effects similarly ravaged streams like Waikamoi, which are so desiccated by multiple diversions that only 27 to 46 percent of expected natural habitat exists -- a fraction of the 50 to 57 percent of expected natural habitat that otherwise exists downstream of a single diversion. *See id.* The Kekiwi, Barclay, and Wendt `ohana bemoan the erosion of their traditional gathering and fishing practices along Waikamoi Stream, among others, on which earlier generations relied to support their gathering of `ōpae, `o`opu, hīhīwai, guava, lilikoi, pohole, and prawns, and to feed the coastline along which they fished to provide for their

[18] The only exception is at Hanawi, where Big Spring maintains steady streamflow despite the diversion. There, "the habitat amount available under diverted conditions is virtually the same as would be available under natural conditions" and "only minor differences in habitat exist for the adult and juvenile nopili, adult nakea, and hihiwai." Letter fr. S. Gingerich to L. Miike (10/31/14).

families. *See* Kekiwi Decl. ¶¶7-12, 14, 18-21; Decl. of Leonora Barclay ¶2; Ed Wendt Decl. ¶¶7-8, 14-16. Native stream species reliant on these diminishing stream habitats endure equally bleak circumstances, with 'ōpae habitat conditions dwindling to 40 percent under diverted conditions. Letter fr. S. Gingerich to L. Miike (10/31/14). Nā Moku confirms the waning populations of 'ōpae and other stream resources. *See,* e.g., H. Hueu Decl. ¶¶13, 15; Kekiwi Decl. ¶10; Martin Decl. ¶11; Young Decl. ¶13.

Relying on USGS' modeling, DAR recommended in December 2009 that the CWRM undertake "actions that support restoration of native species habitat, migratory pathways for upstream recruiting individuals and downstream drifting larvae, and overall pollution structure for eight native fish and macroinvertebrate species inhabiting East Maui streams." Letter from D. Polhemus to CWRM (12/15/09) at 1. In fact, DAR conceded that the return of 100% of the diverted water "would be the most desirable IIFS for protection and management of native stream animals," even though it ultimately recommended that, at a minimum, the CWRM follow the USGS modeling to restore 64% baseflows for 90% habitat recovery. *Id.* at 2. As such, the peer-reviewed research commissioned by the CWRM and corroborated by Nā Moku and other area residents demonstrated a direct correlation between increased streamflow and habitat availability, and conversely, decreased streamflow and diminished or nonexistent habitat availability. Accordingly, if establishing continuous streamflow in the petitioned area (mauka to makai) provides the best conditions for re-establishing the ecological and biological health of the waters of East Maui, ***this*** is the baseline, the minimum starting point from which the Commission must assess how the amended IIFS can be employed to support native stream life and habitats.[19]

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[19] Commissioner Miike during deliberations acknowledged that, "legally [the commission is] supposed to restore all the streams at the minimum at the H90 level." CWRM Minutes (5/25/10) at 47 (relying on the DLNR's Division of Aquatic Resources (DAR) pronouncement that 64% base flow levels in the streams would restore 90% of the habitat (H90) and "is the *bare minimum* for the animals to do all their biofunctions, which is to grow, spawn, etc."). His motion to restore all 19 streams to H90 levels did not pass. *Id.*

2. IIFS Established for Eight of the 27 Streams Used for Taro Cultivation Within Wailuanui, Ke`anae, and Honopou Valleys.

On September 25, 2008, CWRM set the amended IIFS for eight of the 27 streams informed in part by the findings of both USGS studies. CWRM Minutes (9/24/08). However, because the USGS studies were not designed to address streamflow effects (or lack thereof) on native species abundance, water requirements for taro cultivation,[20] or aesthetic and recreational uses, *see* Letter fr. S. Gingerich to L. Miike (10/31/14), the Commission separately considered, at Nā Moku's request, these eight streams' vital role in irrigating wetland taro grown in Wailuanui, Ke'anae, and Honopou valleys. *See* Letter fr. NHLC to CWRM (7/26/01). The Commission adopted its staff's recommendation to amend flow standards for only six of the eight streams that were the subject of its July 2001 restoration efforts then aimed to address the water needs of Nā Moku's wetland taro complexes. *See* CWRM Minutes (9/24/08 – 9/25/08) at 30-31. The 2008 IIFS amendments provided increased flows to Honopou, Hanehoi (which includes Puolua and Huelo), Palauhulu, Waiokamilo, and Wailuanui (which includes Waikani Fall). The Commission declined to increase flow or to amend the IIFS for Piinaau and Kualani.

As to Honopou, a mostly gaining stream, the average annual ground water gain measured immediately downstream of Haiku Ditch is 2.3 mgd or 3.56 cfs, with 50% of the flow originating upstream of the ditch. CWRM Submittal (9/24/08) at 10. Four active diversion systems (Haiku, Lowrie, New Hamakua, and Waiola Ditch) contribute to the 50% reduction in Honopou's natural streamflow. *Id.* As a result of diverted flow conditions, the stream exhibited "poor aquatic and insect diversity," and its "dewatered sections" diminished "habitat availability for native species." *Id.* at 10-13 (CWRM staff reporting that oopu alamo`o was "observed only in the upper reaches"). Operating a total of seven major diversions and two minor diversions on the stream, EMI's piped diversion structures "block[ed] upstream migration of native amphidromous species." Based on these findings, CWRM staff recommended only partial restoration, including a 2.0cfs (1.29mgd) IIFS set downstream of Haiku Ditch to supply adequate water for wetland lo`i situated within a 35-acre cultivable area. Downstream users include two appurtenant

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[20] As discussed *supra*, Section II.B., wetland taro requires 100,000 to 300,000 gallons per acre per day (gad). *See* Reppun Decl., Exhibit A at 5-6, 11.

rights claimants, and taro farmers who blamed pythium rot in their crops on warm water temperatures in reaches just two miles below the last EMI diversion. *Id.* at 11-12. A second IIFS for 0.72 cfs (0.47 mgd) was set downstream from domestic and taro diversions, in the lower part of the hydrologic unit, "to increase the continuity of flow" associated with "enhance[ed] biological integrity," "habitat availability[,] and native species diversity." *Id.* 13-14. Additional benefits reportedly flowing from stream restoration included improved recreational opportunities, increased "opportunities for scenic enjoyment," and enhanced protection and maintenance of the Koolau Forest Reserve. *Id.* at 11-13.

Hanehoi and Huelo (Puolua) Streams experienced poor flow conditions prior to the Commission's decision to partially restore streamflow there. Minimal flows were in stark contrast to "archaeological evidence of extensive taro lo`i along the lower reaches of the streams" and "cultural remains of auwai and ancient terraces in Hanehoi" – conditions suggesting that "water was once readily available." *Id.* at 21. Although a "primary source of domestic water for nearly 100 Huelo area residents," Hanehoi Stream rarely had enough water to support domestic crop cultivation. *Id.* at 22. And at the time of the IIFS setting, only two downstream users declared use for taro cultivation in a cultivable area of 2.3 acres. *Id.* at 21. Dramatically reduced streamflows in preceding decades also made "large sections" of the streams "unsuitable habitat for native animals," particularly in middle and lower reaches. *Id.* at 20, 23. (citing "poor aquatic and insect diversity"). Reduced streamflow also limited recreational and aesthetic opportunities. *Id.* Although CWRM Staff had no data confirming whether the streams were losing or gaining ground water flow, they set one of two IIFS values for Hanehoi at a level ***lower than*** its low base flow value of 1.15 cfs -- "the flow assumed to maintain biological integrity of the stream" -- because CWRM determined that the stream was "an important source of irrigation water for EMI." *Id.* at 24.

Palauhulu Stream reportedly gained flow (averaging 2.7 mgd) from Plunkett Spring below the Ko'olau ditch. *Id.* at 30. CWRM Staff estimated that "[d]iversion at the ditch could decrease natural (undiverted) base flow by 36 percent, and natural (undiverted) total flow by 44 percent." *Id.* Five major and six minor EMI diversions on Palauhulu Stream affect the Keanae lo`i complex containing roughly 107 lo`i; an

impressive figure that nonetheless represents less than 50% of the lo`i available in 1903. *Id.* at 31. Five non-EMI diversions irrigate taro within a 106-acre cultivable area. *Id.* CWRM received public testimony, however, about water being inadequate to support taro cultivation and traditional gathering practices. *Id.* at 33. Palauhulu's "lower reach is reportedly dry from infiltration losses above Store Spring, below which the stream gains an unknown amount of flow from the spring." *Id.* at 30. Palauhulu is one of two streams that feed into Waialohe Pond, which provides habitat for estuarine animals and rich native species diversity; dewatered areas in the streams middle and lower reaches, however, "may affect habitat availability for native species." *Id.* at 31, 34. The stream's lower reaches provide aesthetic opportunities, including Waiokuna and Keaku Falls. *Id.* at 31, 34. CWRM staff recommended restoring 50% of the natural base flow and setting a 5.5 cfs (3.56 mgd) IIFS upstream from the confluence of Piinau and Palauhulu, to support 80 to 90 percent habitat availability. *Id.* at 35. The increase from 4.8 cfs under diverted conditions better ensured that flows reached downstream users in Ke`anae, in recognition of its potential for more taro cultivation and traditional and gathering practices, without sacrificing habitat availability and native species diversity. *Id.* at 34-35.

Waiokamilo, generally a losing stream, runs dry immediately downstream of Koolau Ditch, but gains and then loses again until it nears Dam 2 and 3. *Id.* at 40. CWRM staff estimated that "[d]iversions along the middle reach could decrease natural (undiverted) base flow by 39 percent" and "natural (undiverted) base flow by 70 percent" at the lower reaches. *Id.* There are four major EMI diversions and 24 minor diversions on the stream and its tributaries, which "taro farmers rely heavily on" to feed "two of the larger loi`i complexes in Wailua Valley," *id.* at 44, and to irrigate an "estimated cultivable area of 515 acres." *Id.* at 41. By dewatering different sections of the stream, diversions created disconnected deep pools, restricted upstream migration of native amphidromous species, and limited recreational and aesthetic opportunities. *Id.* at 40-44. Although EMI purported to have "stopped diverting water from Waiokamilo Stream and its tributaries since July of 2007," Wailua Valley taro farmers Steven Hookano and Kimo Day and members of the public provided testimony the lack of continuous water flow and its adverse effects. *Id.* at 41-44. Recognizing the need to provide increased amounts of water for downstream users, but apparently constrained by changing streamflow

characteristics and the uncertainty of water availability, CWRM staff recommended an IIFS of 4.9 cfs (3.17 mgd) - the stream's estimated median total flow based on then available streamflow data. *Id.* at 44. Given its provisional findings, "[s]taff proposed to coordinate with Na Moku and area residents to investigate and monitor streamflow conditions" subject to the AMS. *Id* at 44-45.

As to Wailuanui, the CWRM staff proposed a single interims IFS of 3.05 cfs (1.97 mgd) below the confluence of East and West Wailuanui Streams. Endeavoring to set and IIFS that continued to allow EMI's irrigation diversions, CWRM staff pointed to Wailuanui's import as an irrigation source, "with a total of four major diversions and three minor diversions on the stream and its tributaries." *Id.* at 54. Koolau Ditch, the only of EMI's diversions capturing base flow from Wailuanui, was estimated to "reduce natural total flow by 84 percent," while other diversions between the lowest stream gage and the coast "reduce[d] natural flow by 85 percent." *Id.* at 51. In contrast, CWRM staff concluded that "[s]ince only about a quarter of the taro lo`i in [Wailua] valley receive water from Wailuanui Stream," more water should be made available from Waiokamilo Stream, the other water source used to aid in irrigating 350 cultivable acres in taro. *Id.* at 52, 54, 58. Notwithstanding, the CWRM staff acknowledged that Wailuanui Stream offered a variety of recreational and aesthetic opportunities, housed a rich native species diversity and relatively intact native biota, and lacked many common non-native species. *Id.* at 51-54.

According to CWRM staff, Piinaau's IIFS was maintained at the [1988] status quo level because of the "large uncertainty in the hydrologic data." *Id.* at 33. Apparently, the stream's "complex geology and hydrology" impeded CWRM and USGS's ability to access and collect "reliable streamflow data." *Id.* CWRM staff maintained that "current streamflow conditions" did not warrant increased flow, while simultaneously acknowledging that the stream ran "dry immediately downstream of Koolau Ditch" and that existing diversions "dewater[ed] different sections of the stream," thereby "restrict[ing] upstream migration of native amphidromous species." *Id.* at 30-33. Well aware that Piinaau fed at least 14 lo`i in the Ke`anae Arboretum,[21] boasted an

[21] The lo`i complex at Keanae Arboretum constitutes a portion of the 106 acres of cultivable area in the Piinaau hydrologic unit. *See* CWRM Submittal (9/24/08) at 31.

"outstanding" recreational resource classification by HSA, housed "rich native species diversity," supported "larval recruitment of native fish" near its mouth, and fed the Waialohe Pond habitat for estuarine animals, CWRM nonetheless subordinated the protection and promotion of those statutorily-designated instream uses to existing offstream diversions. *Id.* Similar to Piinaau, CWRM blamed the lack of reliable hydrologic and biological data for its inability to propose an interim IIFS that "balanc[ed] the importance of stream biota with other instream and noninstream uses." *Id.* at 45. Dismissive of the fact that Kualani's "only use" was in service of the Lakini auwai system, itself responsible for irrigating "taro cultivation in the Lakini taro patches and in Wailua Valley further downstream," CWRM concluded that the diversions should continue unabated and be revisited in the event "domestic use needs of area residents" were not being met. *Id.* at 46.

While the Commission decided to amend the IIFS for six streams and maintain the status quo for two, it nonetheless made all eight IIFS decisions subject to an Adaptive Management Strategy ("AMS"). CWRM Minutes (9/24/08 – 9/25/08) at 29-31. Pursuant to the AMS, CWRM staff pledged to implement those IIFS and monitor streamflow conditions in coordination with downstream stakeholders like Nā Moku, adjusting the IIFS based on ongoing field investigations and a continuing dialogue with area residents about their water needs. *See* CWRM Submittal (9/24/08) at 58-59. The September 2008 releases, while a welcome reprieve to the earlier IIFS decided in 1988, still amounted to only 12.18 mgd of the 165 mgd A&B/EMI diverted historically – a proverbial drop in the bucket in comparison to A&B/EMI's massive diversions in the petition area. Incentivized by the Commission's then-Chairman, Laura Thielen, to utilize the AMS process to address their IIFS concerns, Nā Moku refrained from appealing the Commission's paltry releases, assured that the AMS presumed to treat the amended IIFS values as merely "provisional decisions" subject to CWRM staff "looking at underlying reasons for changing those decisions, the difficulty in implementing those decisions, and the effect of those decisions." *See* CWRM Minutes (9/24/08 – 9/25/08) at 27-31; CWRM Submittal (9/24/08) at 27-28; Minute Order No. 9 (9/9/14).

3. The IIFS Amendments for the Remaining 19 of the 27 Were Inconsistent with USGS Modeling and DAR Recommendations

Once the priority streams for taro growing were addressed, the CWRM undertook the IIFS for the remaining 19 streams used by petitioners primarily for gathering purposes. In December 2009, the CWRM staff initially recommended restoring just one of the 19 streams to 0.93cfs (0.32mgd).[22] The DLNR's DAR criticized the CWRM staff recommendation as "unacceptable" from a biological perspective, and, after acknowledging the scientific ideal of returning all streamflows and eliminating all diversions, offered an admittedly less than ideal minimum restoration of 64% base flow for eight of the 19 remaining streams identified by DAR as having the greatest potential for habitat restoration.[23] Letter from D. Polhemus to the CWRM (12/9/09). DAR's "accommodation" in recommending just the eight streams was intended to allow some continued diversion to meet offstream water uses. *Id.* at 2. Even so, the proposed accommodation achieved 90% stream habitat recovery in each of the eight streams after restoring just 64% of the base median flow, effectively reestablishing 45.8 km of 67.3 km native species Habitat Units then impacted by EMI stream diversions. *Id.* at 4. Although not a full restoration, DAR's modest proposal for partial restoration was nonetheless an attempt in scientific compromise to meet the trust purposes for those eight streams while accommodating offstream uses in Central Maui.

After the initial failed attempt in December 2009, the Commission made a final decision on May 25, 2010 primarily aimed to accommodate HC&S' commercial offstream uses during Central Maui's dry season -- it amended six of the 19 IIFS seasonally with only one of the 19 streams, Makapipi, restored on an annual basis. *See* CWRM Minutes (5/25/10) at 49-50. By that time, CWRM staff had amended their recommendation by adopting, in large part, DAR's position and acknowledging the

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[22] The CWRM staff recommended a controlled release at Makapipi to determine whether restoring flow to 0.32 mgd below the major EMI diversion would restore connectivity of the stream to the ocean. CWRM Submittal (12/16/09) at 54.

[23] The 8 streams recommended for restoration by DAR included: Honomanu, Puohokamoa, Waikamoi, Kopili`ula, East Wailuaiki, West Wailuaiki, Makapipi, and Hanawi. *See* Letter from D. Polhemus to the CWRM (12/9/09) at 2-3. The DAR treated Puaka`a Stream as a tributary of Kōpili`ula Stream.

defects of HC&S's proposal to establish a noncontinuous, seasonal-based IIFS to accommodate their commercial water uses during Central Maui's dry season (April through October). *See* CWRM Submittal (5/25/10) at 9-14, 17-20. As the CWRM staff determined, consistent with DAR's scientific recommendations:

> The **maintenance and restoration of stream habitat would benefit from continuous streamflow**. Streams in east Maui are recognized as important habitats for native Hawaiian stream animals. The dry reaches that are often found immediately downstream from the diversions can inhibit species migration. **With a few exceptions, the diversions capture almost all base flow and an unknown amount of total streamflow in each stream**, decreasing flow downstream of the diversion and sometimes causing streams to go dry. **This prevents the upstream migration of native stream animals, restricts surviving adult animals to the disconnected deep pools, and causes postlarvae recruits to be stranded at the stream mouth**.

CWRM Submittal (12/16/09) at 10 (emphases added); *see also id* at 9-14.

The CWRM staff recognized that stream management actions that mimic natural flow patterns with both high and low flows are likely to sustain suitable instream habitats, and, by extension, the animal populations and instream uses dependent on them. CWRM Submittal (5/25/10) at 9. Of course, the main influence on streamflow is precipitation or rainfall runoff in the watershed.[24] The CWRM staff determined from East Maui rainfall data that, unlike Central Maui's typical wet winter/dry summer seasonal pattern, East Maui experiences little seasonal variation in rainfall. *See* CWRM Submittal (5/25/10) at 9.[25] Thus, CWRM staff aptly concluded that an annual IIFS would, from a strictly biological perspective, restore more and healthier habitat year-round and long-term than a seasonal varied IIFS would.[26] *Id.*

Recognizing the superior biological benefit of implementing a single measurable flow standard that mimics East Maui's natural flow pattern and remains in the stream year-round, CWRM staff also pointedly acknowledged that adoption of the seasonal

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[24] *See* Streamflow - The Water Cycle, USGS, *available at* http://water.usgs.gov/edu/watercyclestreamflow.html (last visited December 30, 2014).

[25] Specifically, the CWRM staff found that the evidence revealed a "lack of a seasonal flow pattern" in the pertinent streams, noting that this pattern "is not of a well-defined seasonal trend, but one that varies throughout the year" in ***East Maui***. *Id.* In contrast, the staff found that "rainfall ***in [C]entral Maui*** where a majority of the end water use is located, exhibit a strong seasonal pattern of wet winters and dry summers." *Id.* (emphases added).

[26] *See* Figs. 3-4, CWRM Submittal (5/25/10) at 10.

approach would accommodate offstream commercial use to the detriment of constitutionally-protected instream uses and considerations better served by an annual IIFS[27]:

> The annual interim IFS approach would result in greater stream habitat restoration for building a healthy stream animal population, improving overall stream health, and increasing opportunities for traditional gathering. The seasonal interim IFS approach would provide biological benefit, mandate **noninstream users** to restore streamflow and increase system efficiency during the wet season, and provide for **noninstream uses** during the dry seasons (emphasis added).

CWRM Submittal (5/25/10) at 16-17 (emphasis added).

Ultimately, in May 2010, the CWRM staff recommended amendments of the IIFS for only five of the eight streams originally targeted for partial restoration by the DAR, together with the following additional proposals:

- Unlike the DAR recommendation, including Makapipi Stream on its list of recommendations for restoration because the Nahiku community relies heavily on the stream for cultural practices, recreation, and other instream uses. Appendix D, Staff Submittal (5/25/2010) at 19-20;

- Omitting three streams (Puohokamoa, Haipuaena, and Kopiliula) on the DAR list of streams to partially restore because EMI allegedly used each of those streams to convey upper level ditch water already diverted from other streams east into a segment of each stream to lower elevation diversion ditches. *Id.* at 20;

- Eliminating Puakaa Stream because only a short (300 meter) stretch of stream bed would benefit from restoration, relative to the costs of modifying the applicable stream diversion structures. *Id.* at 20;

- No restoration for Alo, Wahinepee, Punalau, Honomanu, Nuaailua, Ohia, Paakea, Waiaaka, and Kapaula Streams, because it would not result in significant biological restoration from the introduction of additional flow. *Id.*

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[27] The CWRM staff found:

> The annual interim IFS approach would also help to restore the natural life cycle of the native stream biota in east Maui. Native amphidromous species respond to the natural flow regime in which increased streamflow triggers spawning, recruitment, upstream and downstream migration. In the drier periods, these animals can only exist in shallow pools without major growth and reproduction. According to [DAR], management actions that mimic natural flow patterns with both high and low flows are likely to sustain suitable instream habitats and amphidromous animal populations ...

CWRM Submittal (5/25/10) at 9.

Nevertheless, on May 25, 2010, the Commission adopted an annual approach for only one of the 19 streams – Makapipi – based on its "potential for taro cultivation and other instream uses expressed in this community." CWRM Minutes (5/25/10) at 47-50. *See also* CWRM Submittal (5/25/10) at 17, 19-20. The Commission voted to adopt the to accommodate HC&S with a dry season-IIFS for the five other streams subject to the following amendments:

1) An annual interim IFS of 0.1 cfs (0.06 mgd) for Hanawī Stream immediately below the diversion to provide connectivity for stream biota;

2) Seasonal interim IFS for Waikamō`ī (includes `Alo), West Wailuaiki, East Wailuaiki, and Wai`ohue Streams; and

3) Establishing measurable interim IFS of status quo conditions for the remaining 13 streams.

CWRM Submittal (5/25/10), Table 4 at 18. Significantly, the CWRM elected to leave the remaining 13 streams at status quo levels and subject to diversions. CWRM Minutes at 49-50.

At the May 25, 2010 CWRM meeting, after it became clear to Nā Moku that the CWRM majority was going to disregard the recommendations of its fellow Commissioner,[28] DAR staff, and the CWRM staff, Nā Moku requested a contested case hearing. CWRM Minutes (5/25/2010) at 50. The CWRM denied the request. CWRM Minutes (10/18/2010) at 4. Nā Moku appealed the decision with respect to 12[29] of the 19 remaining streams to the Intermediate Court of Appeals ("ICA") and the Hawai`i Supreme Court. After the Supreme Court issued its decision in Nā Wai Eha, the ICA followed with its own decision and reversed the CWRM's decision to deny Nā Moku's request for a contested case. *In re Petition to Amend Instream Flow Standards for Waikamoi, Puohokamoa, Haipuaena, Punalau/Kolea, Honomanu, West Wailuaiki, East Wailuaiki, Kopiliula, Puakaa, Waiohue, Paakea, Kapaula, & Hanawi Streams*, 128 Hawai`i 497, 291 P.3d 395 (2012).

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[28] *See supra* at note 19 on page 16.

[29] Nā Moku did not appeal the CWRM's decision as to Alo, Wahinepe'e, Nua'ailua, 'Ohia, Waia'aka, based on the CWRM's IFSAR reports indicating that these streams were minimally diverted. Nā Moku also did not appeal the controlled release for Makapipi based on discussions with the community association indicating the Nāhiku community's desire to allow the controlled release study.

It is clear that Nā Moku's constitutionally and statutorily protected traditional and customary practices and way of life are suffering under current stream conditions. *See* Aquino Decl. ¶¶19-20; J. Jacintho Decl. ¶16; JP Jacintho Decl. ¶18; Decl. of Lezley Jacintho ¶¶18-19; Decl. of Solomon Kaauamo ¶¶17-18; L. Barclay Decl. ¶¶14, 16; A. Carmichael Decl. ¶19; H. Carmichael Decl. ¶¶13-14; H. Hueu Decl. ¶¶15, 18-19, 21-22; Kekiwi Decl. ¶¶16-17; Martin Decl. ¶¶16-20; Young Decl. ¶13; Ed Wendt Decl. ¶¶14-15; Decl. of Pualani Kimokeo ¶20; Decl. of Ire Kimokeo ¶15; Decl. of Earl Smith ¶15; Scott Decl. ¶¶55-56; Kekahuna Decl. ¶17; Decl. of Carl Wendt ¶¶13-14; Decl. of Steven Hookano ¶¶16-18; Decl. of Joseph "Kimo" Day ¶¶18-19; T. Akuna ¶17; Decl. of Aja Akuna ¶15; Decl. of Emily Wendt ¶28; H. Hueu Decl. ¶¶19, 21, 22. *See also* Decl. of Charles Barclay ¶8; Decl. of Dan Clark ¶9; Decl. of Gladys Kanoa ¶¶8-10.

Some cannot open up new taro patches, *see*, e.g., A. Akuna Decl. ¶15, while others have had to close their lo`i. *See,* e.g., Day Decl. ¶19; Hookano Decl. ¶16. In some places, the water is warm, which indicates low flow, *see*, e.g., I. Kanoa Decl. ¶16; *see also* Scott Decl. ¶57, and some farmers' taro have become diseased and damaged. *See id; see also*, e.g., P. Kimokeo Decl. ¶20; Kekiwi Decl. ¶16. People have to walk farther to gather ʻōpae, *id.* ¶¶10, 17, and there is less fish at the shoreline. *Id.* at 17; J. Jacintho Decl. ¶16. As one community member put it, "[i]f there is no water, there is no life." T. Akuna Decl. ¶17. The need for water has also displaced East Maui families, *see* Martin Decl. ¶20; T. Akuna Decl. ¶17, L. Barclay Decl. ¶16, and is preventing the older generations from passing on the traditions they learned from their kupuna. *See* Ed Wendt Decl. ¶14; A. Carmichael Decl. ¶19. "It hurts . . . to see the `āina and its resources suffering." C. Wendt Decl. ¶13. These sentiments echo the importance of fresh water, which is "essential to the perpetuation of Native Hawaiian traditional and customary practices." Tengan Decl. ¶37.

For the most part, Nā Moku desires the return of the streams' natural flow. As captured by Emily Wendt, "the priority should be to leave water in East Maui streams so the people who used it traditionally can continue to survive like my `ohana used to be able to do." Emily Wendt Decl. ¶30. Restored and increase streamflow would allow taro farmers to open up new patches, *see*, e.g., I. Kanoa Decl. ¶17; A. Akuna Decl. ¶16, and restore practices they learned from the generations before them. *See*, e.g., Decl. of Jonah

Kuponoikeauea Hueu ¶12; Martin Decl. ¶21; Kaauamo Decl. ¶19; Ed Wendt Decl. ¶16; L. Jacintho Decl. ¶22. According to Tengan, "The return of streamflows will support the regeneration of the land and people." Tengan Decl. ¶37.

III. ARGUMENT

During the course of the public hearings on East Maui Streams, the Commission held a contested case over water in Central Maui. On appeal for that case, the Hawai`i Supreme Court rendered definitive and clear judicial guidance on important governing water law principles relevant to the setting of IIFS. *See In Re `Īao Ground Water Management Area High-Level Source Water Use Permit Applications and Petition to Amend Interim Instream Flow Standards of Waihe`e River and Waiehu, 'Īao, and Waikapū Streams Contested Case Hearing,* 128 Hawai`i 228, 287 P.3d 129 (2012) ("*Nā Wai `Ehā*"). The relief Nā Moku now seeks arises from this Commission's constitutional imperative, as the primary guardian of public rights, to set the amended IIFS for the 27 East Maui streams consistent with its obligation to protect the public trust placed on all waters of the State of Hawai'i. *See Waiāhole I*, 94 Hawaii at 143, 9 P.3d at 455. *See also King v. Oahu Railway & Land Co.*, 11 Haw. 717 (1899); *Robinson v. Ariyoshi*, 65 Haw. 641, 674, 658 P.2d 287, 310 (1982). The law demands that the State and its agencies affirmatively preserve and protect these rights against unreasonable interference. *Ka Pa`akai O Ka `Āina v. Land Use Commission*, 94 Hawai`i 3, 45, 7 P.3d 1068, 1082 (2000) (*"Ka Pa`akai"*).

The public trust doctrine, a fundamental principle of constitutional law in Hawai`i, governs these contested case proceedings and designates the CWRM as the primary guardian of public rights under the trust. The public trust doctrine also compels the CWRM to take the initiative in considering, protecting, and advancing public rights in state water resources at every stage of the planning and decision making process. *See Waiāhole I,* 94 Hawai`i at 143, 9 P.3d at 455. Thus, the CWRM's duty to protect and defend public trust resources and the entire range of public trust purposes dependent thereon is a categorical imperative.

However, the history of the instant case evidences the CWRM's longstanding passivity and consequent sanctioning of unjustified stream diversions by means of flawed IIFSs. Forsaking its public trust obligations and the protections afforded public trust

resources under the laws of this State, the CWRM has historically set IIFS – the primary mechanism by which it discharges its duties – without due regard for its effect on public trust purposes. Moreover in recent years, the CWRM actually exacerbated the injury inflicted upon those, like Nā Moku, with superior rights to the State's water resource, by failing to enforce the IIFSs now in place and failing to timely and effectively monitor the impacts those IIFSs have on public trust purposes. The law demands, however, that IIFS decisions be subject to the same public trust principles to which all state water resources are subject, namely, preserving the right to water for the common good, and preventing private water rights from injuriously affecting the rights of others. *See Nā Wai `Ehā*, 128 Hawai`i at 281, 287 P.3d at 182.

A. CWRM Must Fulfill Its Duties to Protect and Promote the Entire Range of Public Trust Purposes and Uses Dependent on Instream Flows.

Under the Hawai`i Constitution and the public trust doctrine, the State's first duty is to protect the fresh water resources (surface and ground) which are part of the public trust res. Haw. Const. Art. XI, § 7; *Waiāhole I*, 94 Hawai`i at 113, 9 P.3d at 425 (citing *Robinson,* 65 Haw. at 674, 658 P.2d at, 310). The State Constitution declares that "all public resources are held in trust by the state for the benefit of its people," *id.* at 133, 9 P.3d at 445, and establishes a public trust obligation "to protect, control, and regulate the use of Hawaii's water resources for the benefit of its people." *Id.* The *Waiāhole I* court clearly established:

> The duty to protect public water resources is a categorical imperative and the precondition to all subsequent considerations, for without such underlying protection the natural environment could, at some point, be irrevocably harmed and the 'duty to maintain the purity and flow of our waters for future generations and to assure that the waters of our land are put to reasonable and beneficial uses' could be endangered.

Id. at 113, 9 P.3d at 425 (citation omitted). The Court was particularly pointed in recognizing, consistent with the Constitution, the CWRM's critical role as "the primary guardian of public rights under the trust" and consequent proscription that it:

> not relegate itself to the role of a mere 'umpire passively calling balls and strikes for adversaries appearing before it,' but instead must take the initiative in considering, protecting, and advancing public rights in the resource at every stage of the planning and decisionmaking process. Specifically, **the public trust compels the state duly to consider the cumulative impact of existing and**

> **proposed diversions on trust purposes** and to implement reasonable measures to mitigate this impact, including the use of alternative sources. The trust also requires planning and decisionmaking from a global, long-term perspective. In sum, the state may compromise public rights in the resource pursuant only to a decision made with a level of openness, diligence, and foresight commensurate with the high priority these rights command under the laws of our state.

Id. at 143, 9 P.3d at 456 (brackets and citations omitted) (emphases added); *see also id.* at 132, P.3d at 674 ("[M]ere compliance by [agencies] with their legislative authority is not sufficient to determine if their actions comport with the requirements of the public trust doctrine."). Thus, the CWRM's public trust duties supersede those duties outlined by the Water Code or administrative rules and demand that it protect public trust uses and Native Hawaiian rights as the law commands. *See id.* at 138, 9 P.3d at 450.

The Water Code defines an "instream flow standard" as "a quantity or flow of water or depth of water which is required to be present at a specific location in a stream system at certain specified times of the year to protect fishery, wildlife, recreational, aesthetic, scenic and other beneficial instream uses." HRS §174C-3. Under the Water Code, "instream flow standards serve as the primary mechanism by which the [CWRM] is to discharge its duty to protect and promote the entire range of public trust purposes dependent upon stream flows." *Nā Wai `Ehā*, 128 Hawai`i at 244, 287 P.3d at 145 (citing *Waiāhole I,* 94 Hawai`i at 148, 9 P.3d at 460).

Hence, it is imperative that CWRM analyze the IIFS determinations for the 27 East Maui streams with due regard for the cumulative impact of its decisions on public trust purposes, inclusive of stream protection and traditional, customary and recreational uses of stream water.

1. Nā Moku's Superior Constitutionally-Protected Interest in Water Triggers the CWRM's Duty, as a Public Trustee, to Independently Verify that A&B/EMI's Diversions Do Not Affect Native Hawaiian Rights.

Native Hawaiian traditional and customary rights are a protected public trust purpose. *See id.* at 137, 9 P.3d at 449 ("[W]e continue to uphold the exercise of Native Hawaiian and traditional and customary rights as a public trust purpose."); *see also Kauai Springs, Inc. v. Planning Comm'n of the Cty of Kaua`i*, 2014 Haw. LEXIS 104, *94

(2014) ("[T]he public trust protects the use of water in 'the exercise of Native Hawaiian and traditional and customary rights[.]'").

Pursuant to Haw. Const., Article XII, §7, the State of Hawai`i is under an obligation to protect the rights of those, like Nā Moku, who engage in, or seek to engage in, the traditional and customary practices of their Hawaiian ancestors to gather `o`opu, 'ōpae, and hīhīwai from streams and to fish and gather limu along the coastlines fed by those streams. Article XII, § 7 of the Hawai`i Constitution expressly provides:

> The State reaffirms and shall protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua`a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778, subject to the right of the State to regulate such rights.

This provision (1) places an affirmative duty on the State and its agencies to preserve and protect traditional and customary native Hawaiian rights and (2) confers upon the State and its agencies "the power to protect these rights and to prevent any interference with the exercise of these rights." *Ka Pa`akai,* 94 Hawai`i at 45, 7 P.3d at 1082 (2000). The Supreme Court has repeatedly recognized that "the reasonable exercise of ancient Hawaiian usage is entitled to protection under article XII, section 7." *Public Access Shoreline Hawaii v. County of Hawai`i,* 79 Hawai`i 425, 437, 442, 903 P.2d 1246, 125, 1263 (1995) ("*PASH*"); *see also Kalipi v. Hawaiian Trust Co.*, 66 Haw. 1, 656 P.2d 745 (1982) (recognizing Hawai`i's constitutional mandate to protect traditional and customary native Hawaiian rights); *Pele Defense Fund v. Paty,* 73 Haw. 578, 620, 837 P.2d 1247, 1272 (1992) (reaffirming the "rudiments of native Hawaiian rights protected by article XII, § 7" of the Hawai`i Constitution).

Native Hawaiian rights have existed since time immemorial. They are rooted in HRS § 7-1[30], a derivative of Section 7 of the Kuleana Act of 1850, which "grants rights

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[30] HRS § 7-1 provides:

> Where the landlords have obtained, or may hereafter obtain, allodial titles to their lands, the people on each of their lands shall not be deprived of the right to take firewood, house-timber, aho cord, thatch, or ki leaf, from the land on which they live, for their own private use, but they shall not have a right to take such articles to sell for profit. The people shall also have a right to drinking water, and running water, and the right of way. The springs of water, running water, and roads shall be free to all, on all lands granted in fee simple; provided that this shall not be applicable to wells and watercourses, which individuals have made for their own use.

to the people." *Akau v. Olohana,* 65 Haw. 383; 652 P.2d 1130 (1982); *Palama v. Sheehan,* 50 Haw. 298, 440 P.2d 95 (1968); *see also* Declaration of Teresa "Teri" Gomes ¶7. In turn, HRS § 1-1[31] gives Native Hawaiians the continued right to exercise their practices. *See Kalipi v. Hawaiian Trust Co.*, 66 Haw. 1, 656 P.2d 745 (1982).[32] The Hawai`i Water Code also explicitly protects Native Hawaiian traditional and customary rights. HRS § 174C-101(c) provides:

> Traditional and customary rights of ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778 shall not be abridged or denied by this chapter. Such traditional and customary rights shall include, but not be limited to, the cultivation or propagation of taro on one's own kuleana and the gathering of hihiwai, opae, o'opu, limu, thatch, ti leaf, aho cord, and medicinal plants for subsistence, cultural, and religious purposes.

See also HRS § 174C-101(d) ("The appurtenant water rights of kuleana and taro lands, along with those traditional and customary rights assured in this section, shall not be diminished or extinguished by a failure to apply for or to receive a permit under this chapter."). Additionally, the Hawai`i Supreme Court has explicitly held that native Hawaiians in their exercise of traditional and customary rights are not limited to the ahupua`a in which they reside so long as they can demonstrate that the exercise of their practices beyond the boundaries of their ahupua`a of residence was traditional and customary. *See Pele Defense Fund,* 73 Haw. at 620-21, 837 P.2d at 1272.

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[31] HRS § 1-1 provides:

> The common law of England, as ascertained by English and American decisions, is declared to be the common law of the State of Hawaii in all cases, except as otherwise expressly provided by the Constitution or laws of the United States, or by the laws of the State, or fixed by Hawaiian judicial precedent, or established by Hawaiian usage; provided that no person shall be subject to criminal proceedings except as provided by the written laws of the United States or of the State.

[32] The *Kalipi* Court held that the Hawaiian usage provision of HRS § 1-1 represented an attempt to permit the continuance of native understandings and practices which did not unreasonably interfere with the spirit of the common law. The Court did not require that a Native Hawaiian prove that his specific ancestors engaged in the custom in the particular area. In fact, the English doctrine of custom, which is akin to the Hawaiian usage provision, applies to all the residents of an area, without any requirement of proof that one's family engaged in a practice historically. The Court additionally relied on an Oregon Supreme Court decision that confirmed: "But it does not follow that a custom, established in fact, cannot have regional application and be enjoyed by a larger public than the inhabitants of a single village." *Kalipi*, 66 Haw. at 10, 656 P.2d at 751 (citing *State ex rel Thornton v. Hay,* 462 P.2d 671, 678 n.6 (Or. 1969)).

Although the State's power to regulate the exercise of Hawaiian rights "necessarily allows the State to permit development that interferes with such rights in certain circumstances . . . , the State is obligated to protect the reasonable exercise of customarily and traditionally exercised rights of Hawaiians to the extent feasible." *PASH,* 79 Hawai`i at 450 n.43, 903 P.2d at 1271 n.43. Therefore, state agencies, including the CWRM, "may not act without independently considering the effect of their actions on Hawaiian traditions and practices." *Ka Pa`akai,* 94 Hawai`i at 46, 7 P.3d at 1083 (citing *PASH*, 79 Hawai`i at 437, 903 P.2d at 1258).

In *Ka Pa`akai*, the Hawai`i Supreme Court introduced an analytical framework to which agencies are bound when balancing their obligation to protect traditional and customary practices against private property interests. Indeed, a government agency must -- at a minimum -- make specific findings and conclusions as to the following:

> (1) the identity and scope of "valued cultural, historical, or natural resources" in the . . . area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area; (2) the extent to which those resources -- including traditional and customary native Hawaiian rights -- will be affected or impaired by the proposed action; and (3) the feasible action, if any, to be taken . . . to reasonably protect native Hawaiian rights if they are found to exist.

Id. at 47, 7 P.3d at 1084. To this end, the CWRM has "an affirmative duty" to "protect these rights and to prevent any interference with the exercise of these rights." *Nā Wai `Ehā,* 128 Hawai`i at 247, 287 P.3d at 148.[33]

Here, Nā Moku wishes to **reasonably** exercise their traditional and customary rights within and beyond the boundaries of their ahupua`a of residence -- that is, to (1) cultivate taro lo`i on a **fraction** of the acreage their ancestors used, and which the

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[33] In *Nā Wai `Ehā* , the Hawai`i Supreme Court squarely addressed whether the CWRM erred in establishing an IIFS for Nā Wai `Ehā, the Four Great Waters (Waihe`e, Waiehu, ʻĪao, and Waikapū), that did not properly protect traditional and customary native Hawaiian rights. In the underlying contested case hearing, petitioners complained of the IIFS's impact on Native Hawaiians who gathered stream life for subsistence and medicinal purposes, cultivated taro, gathered materials for hula and lua, and conducted spiritual practices in the stream, and testified in support of practices they sought to reestablish – that is, they "would like to expand the scope of their traditional and customary practices and plan to do so if water is returned to the streams." *Nā Wai `Ehā*, 128 Hawai'i at 246, 287 P.3d at 147. The Court ultimately concluded, consistent with Nā Moku's above argument, that the CWRM has specific duties under *Ka Pa`akai* and that the Commission is legally obligated to specifically address "**the effect of the amended IIFS on the native Hawaiian practices**" and/or "explain[] the feasibility of protecting the practices." *Id.* at 248, 287 P.3d at 149 (emphasis added).

streams, in their undiverted state, have the capacity to support,[34] and (2) gather and fish from a **fraction** of the streams from which their ancestors once gathered and fished to support their subsistence lifestyles – traditional and customary[35] instream uses which the State is obligated to protect. *See PASH,* 79 Hawai`i at 450 n.43, 903 P.2d at 1271 n.43. Thus, CWRM's IIFS decision affects Nā Moku's rights because any change in the flow of the petitioned East Maui streams impacts their exercise of traditional and customary rights. *See* Nā Moku's Petition for a Contested Case Hearing Filed June 4, 2010 at 3-6. Fresh water is "fundamental to the exercise of traditional and customary practices" and is, therefore, "essential" to the perpetuation of these practices. Tengan Decl. ¶¶ 14, 37.

Nā Moku currently farms (or wishes to farm) kalo, gathers (or seeks to gather) ʻōpae, hīhīwai, ʻoʻopu and other resources, and fishes (or seeks to fish) for subsistence and cultural purposes in the geographic area bounded by Makapipi on the east to Honopou on the west. Exhibit A-1. Where EMI diversions leave little to no streamflow in these streams, Nā Moku wishes to reestablish their traditional and cultural practices in those streams. *Id. See Nā Wai `Ehā*, 128 Hawai`i at 246, 287 P.3d at 147. These practices extend beyond Honopou, Ke`anae, and Wailuanui -- the respective ahupua`a in which petitioners reside -- as has been traditional and customary, extending from Honopou in the west to Makapipi in the east. *See* McGregor Decl., Exhibit A at 14; *Kalo Kanu o Ka `Āina* at 13, 105-123. Thus, Nā Moku's traditional and customary practices outside of Honopou, Ke`anae, and Wailuanui are similarly entitled to protection. *See Pele Defense Fund*, 73 Haw. at 620-621, 837 P.2d at 1272.

As in *Nā Wai Eha*, the Commission has ample evidence to fulfill its duties and to properly exercise its authority under the public trust doctrine. Moreover, the law demands that the CWRM protect and prioritize public trust uses and Native Hawaiian rights **above** private, commercial uses in recognition that "if the public trust is to retain any meaning

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[34] *See* Table No. 1, *supra* at 10.

[35] *See* McGregor Decl. ¶11 (opining that the witness statements of Charles Barclay, Leonora (Smith) Barclay, Awapuhi Carmichael, Healoha Carmichael, Dan Clark, Pualani Kimokeo, Norman "Bush" Martin, Lurlyn "Lyn" Scott, Harry Hueu, Jonah Kuponoikeauea Hueu, Jonah Jacintho, Juliana Jacintho, Lezley Jacintho, James F. "Kimo" Kaaa, Gladys Kanoa, Sanford Kekahuna, Jerome K. Kekiwi, Jr., Ire Kimokeo, Earl Smith, Carl Wendt, Joseph "Jojo" Young, Isaac Kanoa, Emily Akiona Wendt, Aja Akuna, Terrance D.K. Akuna, Darrell Aquino, Joseph Kimo Day, and Steven Hoʻokano are consistent with her findings regarding the traditional and customary practices of the region, i.e., that the practices of the current witnesses are traditional and customary).

and effect, it must recognize enduring public rights in trust resources separate from, and superior to, the prevailing private interests in the resources at any given time." *Waiāhole I*, 94 Hawai`i at 138, 9 P.3d at 450.

Given the evidence of existing traditional and customary practices - which includes testimony of Native Hawaiians who practice or seek to reestablish customs and traditions rooted in this place and the people from whom they descend - the CWRM is bound to follow the specific procedural obligations the constitutional and statutory provisions clearly laid out by the Hawai`i Supreme Court. Absent an affirmative demonstration that A&B/EMI's proposed use will **not** affect native Hawaiians' rights, CWRM is legally bound to enter amended IIFS that fulfill its obligation to preserve and protect traditional and customary rights. *See In re Kukui*, 116 Hawai`i 481, 509, 174 P.3d 320, 348 (2007); *Waiāhole I*, 94 Hawai`i at 142, 9 P.3d at 454; *In the Matter of the Contested Case Hearing on Water Use, Well Construction, and Pump Installation Permit Applications, Filed By Waiola O Molokai, Inc. and Molokai Ranch, Ltd,* 103 Hawai`i 401, 442, 83 P.3d 664, 705 (2004) (holding that the CWRM erred by relying on the mere absence of evidence that a proposed water use would affect native Hawaiians' rights).

2. The CWRM's Burden to Protect Instream Values to the Extent Practicable Supports Protection in Favor of Public Trust Uses.

To ensure that instream flow levels protect and promote public trust purposes supported thereby, HRS §174C-71 mandates that "each instream flow standard shall describe the flows necessary to protect the public interest in the particular stream. Flows shall be expressed in terms of variable flows necessary to protect adequately fishery, wildlife, recreational, aesthetic, scenic, or other beneficial instream uses in the stream in light of existing and potential water developments including the economic impact of restriction of such use." HRS §174C-71(1)(C). The Water Code further instructs that, "to avoid or minimize the impact on existing uses of preserving, enhancing, or restoring instream values, the commission shall consider physical solutions, including water exchanges, modifications of project operations, changes in points of diversion, changes in time and rate of diversion, uses of water from alternative sources, or any other solution[.]" HRS §174C-71(1)(E). Thus, minimizing impacts on existing uses to preserve, enhance, or restore instream values, is a chief consideration in setting IIFS.

In the context of IIFS petitions, the Hawai'i Supreme Court has ruled that the Water Code "does not place a burden of proof on any particular party." *Nā Wai `Ehā,* 128 Hawai'i at 253, 287 P.3d at 155. Rather, both the duty and burden to determine reasonable IIFSs that "protect instream values to the extent practicable" and "protect the public interest" appropriately rests with the Commission, the primary guardian of public rights under the trust. *Id.* (citing *In the Matter of Water Use Permit Applications, Petitions for Interim Instream Flow Standard Amendments, and Petitions for Water Reservations for the Waiāhole Ditch Combined Contested Case Hearing*, 105 Hawai`i 1, 11, 93 P.3d 643, 653 (2004) ("*Waiāhole II*"); HRS § 174C-71(2)(A)).

Importantly, neither the Water Code nor the CWRM's burden in determining IIFS may act to "supplant the protections of the public trust doctrine" or "override [it] or render it superfluous." *Waiāhole I,* 94 Hawai`i at 133, 9 P.3d at 445. The public trust doctrine, which is enshrined both in the constitution and the Water Code, *see id.* at 146, 9 P.3d at 458, protects public trust instream use and does not include "private commercial use as a protected 'trust purpose,'" *id.* at 138, 9 P.3d at 450. Moreover, the public trust mandates that "any balancing between public and private purposes begin with a presumption in favor of public use, access, and enjoyment" and "establishes use consistent with trust purposes as the norm or 'default' condition." *Id.* at 142, 9 P.3d at 454. Thus, it "prescribes a 'higher level of scrutiny' for private commercial uses." *Id. See also Nā Wai `Ehā*, 128 Hawai'i at 259, 287 P.3d at 160 (recognizing the "general standard" specified in the final decision that for "those seeking private, commercial uses of water, there is a higher level of scrutiny.").

3. The CWRM Must Invoke a Higher Level of Scrutiny to Private Commercial Uses of Water than for Trust Uses.

As previously stated, the *Waiāhole I* Court has established that the CWRM must invoke a "higher level of scrutiny" for private commercial uses of water like those of HC&S. *Waiāhole I,* 94 Hawai`i at 142, 9 P.3d at 454. In doing so, the CWRM must demand justification from the diverter who seeks to overcome the public trust over water resources and the strong presumption in favor of public trust purposes. This is because "the state may compromise public rights in the resource pursuant only to . . . the high priority these rights command under the laws of our state." *Id.* at 143, 9 P.3d at 455.

Indeed, the Court has repeatedly stressed the importance of a "thorough assessment" when a public agency deals with a public trust resource. *Kelly v. 1250 Oceanside Partners*, 111 Hawai`i 205, 231, 140 P.3d 985, 1011 (2006). The CWRM must satisfy this obligation, based on the "best information available," whether or not diverters like HC&S/EMI are forthcoming with justifications for their private, offstream, commercial uses. *Waiāhole I,* 94 Hawai`i at 155, n.60, 9 P.3d at 467 n.60. In fact, in the absence of adequate justification, the public trust mandates that the CWRM's default position is to "begin with a presumption in favor of public use, access, and enjoyment." *Id.* at 142, 9 P.3d at 454. Thus, the CWRM is obligated to follow important guidelines and procedures ***prior to*** authorizing diversions that serve a commercial purpose. Its failure to do so or to remedy prior miscarriages contravenes its constitutional and statutory trustee obligations.

4. The Public Trust Requires the Maintenance of Streamflows To Ensure Protection of Public Trust Resources.

How is the Commission to hold public trust purposes inviolable during the course of these proceedings? The answer is relatively simple. First, the State's chief duty is to protect the fresh water resources (surface and ground) which are part of the public trust res. Haw. Const. Art. XII, § 7; *Waiāhole I*, 94 Hawai`i at 113, 9 P.3d at 425 (citing *Robinson*, 65 Haw. at 674, 658 P.2d at 310). The impartial scientific data various state and federal agencies analyzed and compiled for years constitute the best information presently available to the Commission for setting IIFS that "protect adequately fishery, wildlife, recreational, aesthetic, scenic, or other beneficial instream uses." HRS § 174C-71(1)(C). Concomitant with the CWRM's public trust obligations is its affirmative duty to "preserve and protect customary and traditional practices of native Hawaiians," which, in this instance, means identifying, assessing the impact on, and protecting Nā Moku's traditional and customary rights and the East Maui resources on which they rely to continue their practices. *See Ka Pa`akai*, 94 Hawai`i at 45-47, 7 P.3d at 1082-84; *see also Nā Wai `Ehā*, 128 Hawai`i at 247, 287 P.3d at 148.

To this end, Nā Moku urges the Hearings Officer to aid the CWRM in satisfying its first duty -- to protect the freshwater resources for the common good -- by recommending the most desirable IIFS for protection and management of the resource

and native stream animals: the return of all natural streamflow to the 27 petitioned streams constituting less than one-third of all streams diverted by A&B/EMI's East Maui Ditch System alone. *See* Letter(s) fr. D. Polhemus to the CWRM (12/09/09, 12/15/09). *See also* Exhibit A-145. Alternatively, the Hearings Officer should recommend that the CWRM shall, at a minimum, restore 64% baseflows to achieve 90% habitat recovery in each of the diverted streams subject to IIFS adjustments that achieve full connectivity, from mauka to makai, to support the spawning, recruitment and migration vital for to a thriving native stream species population and their posterity. *See supra* Section II.E.1 and 2. Those provisions, in turn, serve the water needs of gatherers and fishers, like Nā Moku (and other East Maui community members), who rely (or seek to rely) on the 27 streams to reasonably exercise traditional and customary practices; inviolable, constitutionally-protected rights which also entitle them to a freshwater supply that meets the farming needs of lo`i complexes situated in the historic taro-growing areas of Honopou, Hanehoi, and Keanae-Wailuanui. *See* Table No. 1, *supra* at 10.

Accordingly, for those like A&B/EMI who seek to utilize these public trust resources, such uses must be justified in light of the purposes protected and prioritized under the trust and must not be permitted to reduce the levels of streamflows to the point that it detrimentally impacts public trust purposes. The law and the evidence compel the Commission to restore East Maui stream flows and re-establish resources and rights that existed and flourished before the water ran dry.

B. The Precautionary Principle Requires Setting IIFS to Protect the Public Trust Purposes, Including Native Hawaiian Traditional and Customary Farming and Subsistence Practices

In *Waiāhole I,* the Court cited with approval the CWRM's conclusion that:

> **Where scientific evidence is preliminary and not yet conclusive regarding the management of freshwater resources** which are part of the public trust, **it is prudent to adopt "precautionary principles" in protecting the resource.** That is, where there are present or potential threats of serious damage, lack of full scientific certainty should not be a basis for postponing effective measures to prevent environmental degradation. . . . In addition, where uncertainty exists, a trustee's duty to protect the resource mitigates in favor of choosing presumptions that also protect the resource.

94 Hawai`i at at 154, 9 P.3d at 466 (emphases added).[36] And while scientific uncertainty may counsel against setting *permanent* instream flow standards (IFS), the Court reasoned that amendments to *interim* IFS necessarily contemplates "future predictions, generalized assumptions, and policy judgments" in conjunction with "scientifically proven facts." *Id.* at 155, 9 P.3d at 467. Thus, in amending an *interim* IFS, the CWRM "need only reasonably estimate instream and offstream demands." *Id.* As the Hawai`i Supreme Court stated:

> **Uncertainty** regarding the exact level of protection necessary **justifies neither the least protection feasible nor the absence of protection**. . . . although **interim standards** are merely stopgap measures, they **must still protect instream values to the extent practicable**. ...

Id (emphases added). As discussed *supra*, this standard requires affirmative actions to protect the resource first. Moreover,

> [i]n furtherance of its trust obligations, the Commission may make reasonable precautionary presumptions or allowances in the public interest. The Commission may still act when public benefits and risks are not capable of exact quantification. At all times, however, **the Commission should not hide behind scientific uncertainty, but should confront it as systematically and judiciously as possible -- considering every offstream use in view of the cumulative potential harm to instream uses and values and the need for meaningful studies of stream flow requirements**. We do not expect this to be an easy task. Yet it is nothing novel to the administrative function or the legal process in general.

Id. at 159, 9 P.3d at 471 (emphases added). The CWRM should always consider providing reasonable "margins of safety" for instream trust purposes when amending IIFS. *Waiāhole I*, 94 Hawai`i at 156, 9 P.3d at 468.

Because the streams of East Maui may have varying flow conditions along their watercourse -- *i.e.*, gaining or losing stretches, intervening springs increasing flow, or water seepages depleting flow - points of measurement for IIFS purposes can be critical. Consistent with the "best [scientific] information available," the CWRM should strive to set IIFSs that prioritize "restoring stream habitat and connectivity" between the ocean and upper reaches of the affected watercourse. *See Waiāhole I,* 94 Hawai`i at 155, n.60, 9

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[36] Focused on the ecological values of instream uses at the time, the Court in *Waiāhole I* recognized that, "[f]or the foreseeable future, it will be necessary to manage and protect streams through a system of working presumptions rather than on the basis of firm scientific knowledge." 94 Hawai`i at 114, 9 P.3d at 426.

P.3d at 467 n.60; Letter from D. Polhemus to the CWRM (12/15/09) at 2. In that way, the amphidromous species whose life cycle, indeed survival, depends on migration between the ocean and the stream will be assured a pathway to continued reproduction and a thriving population. To effectively achieve these results and strict IIFS compliance, CWRM should be taking streamflow measurements along those points most susceptible to connectivity challenges.

For this reason, the CWRM should order full restoration of all streams being diverted, and presume, under the precautionary principle, that the reproductive health of amphidromous stream animals requires nothing less than full connectivity throughout the watercourse. The same precautionary principle counsels CWRM to act ***timely*** to secure that margin of safety, recognized by law, to protect the stream life and streamflow necessary to support traditional and customary practices. Alternatively, at a minimum, CWRM's restoration should allow for the return of 64% of base flow (Q_{90}), *see supra* Section II.E.1 and 2, to the affected streams subject to IIFS adjustments that achieve full connectivity, from mauka to makai.

1. The CWRM Should Invoke the Precautionary Principle in Setting IIFS to Protect the Public Trust Purposes Given Prior Experience.

In view of its public trust duties, the Water Code, and the precautionary principle, the CWRM should provide full restoration to all 27 streams. It is clear that anything less than that will continue to harm Nā Moku and other taro farmers and subsistence gatherers and fishers dependent on freely flowing streams.

As discussed *supra*, a total of 490 lo`i of various sizes were historically recorded just in Ke`anae and Wailuanui alone. *Kalo Kanu o Ka `Āina* at 25. The CWRM reports that for the entire Hamakua-Ko`olau region, a total of 493.72 acres are available for taro farming. Table No. 1, *supra* at 10. Here, Nā Moku seeks streamflow adequate to irrigate a mere fraction of that number -- that is, 146.75 cultivable acres in taro based on the land tenure history of those parcels. *See* Gomes Decl. ¶¶ 74, 120, 173, 252, 280, 285. Applying Paul Reppun's water requirement calculation to Nā Moku's lo`i acreage totals requires 14.68mgd to 44.03mgd to be restored to streams feeding Honopou, Ke`anae, and Wailua Valleys. For taro farmers that have appurtenant water rights, protected by Haw.

Const. art. XI, §7,[37] or are associated with the traditional and customary uses of water prior to 1892 along these lo`i feeding streams, there is more acreage than water available from the full restoration of Wailuanui, Kualani, Waiokamilo, Pi`ina`au, Palauhulu, and Honopou Streams. *Compare* Table No. 1, *supra* at 10, *with* Written Testimony of D. Uyeno (12/18/2014), Chart at 5. CWRM is therefore not only justified under the precautionary principle but required, in discharging its public trust responsibilities, to set an amended IIFS that fully restores those streams. Indeed, compelling EMI to remove **all** diversions from those eight lo`i-feeding streams is the only prudent solution for providing taro farmers reliant on those streams in Honopou, Wailuanui, and Ke`anae enough water to irrigate their fields and to continue their traditional and customary practices. Moreover, full restoration also ensures that the water needs of the gatherers/fishers who rely or intend to rely on those streams for traditional and customary gathering and fishing are satisfied.

The remaining 19 streams are less subject to scientific uncertainty than those at issue in *Waiāhole I.* In this instance, the two available scientific studies conducted by the USGS and DAR for East Maui streams make clear that the minimal standard for restoration of stream flow is to achieve a 64% restoration of stream flow (in this case BQ_{50}) in order to achieve 90% restoration of habitats. *See supra* Section II.E.1 and 2; Gingerich, S.B. and Wolff, R.H., 2005, *Effects of surface-water diversions on habitat availability for native macro-fauna, northeast Maui, Hawaii: U.S. Geological Survey*

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[37] Appurtenant rights, an incident of land ownership, refer to the "rights to the use of water utilized by parcels of land at the time of their original conversion into fee simple lands." *Reppun v. Board of Water Supply*, 65 Haw. 531, 554-556, 656 P.2d 57, 71 (1982). Appurtenant rights are an incident of land ownership. The measure of an appurtenant right is the amount of water utilized at the time of the Māhele, generally, but not exclusively for taro cultivation. *McBryde Sugar Co. Ltd. v. Robinson*, 54 Haw. 174, 187-191, 504 P.2d 1330, 1339-41 (1973). As mentioned *supra*, the Hawaii State Constitution, article XI, section 7, expressly protects appurtenant rights:

> The legislature shall provide for a water resources agency which, as provided by law, shall set overall water conservation, quality and use policies: define beneficial and reasonable uses: protect ground and surface water resources. watersheds and natural stream environments: **establish criteria for water use priorities while assuring appurtenant rights** and existing correlative and riparian uses and establish procedures for regulating all uses of Hawaii's water resources.

Haw. Cons. Art. XI, sec. 7 (emphasis added). Additionally, the Water Code specifically protects appurtenant rights. HRS §174C-63 provides: "Appurtenant rights are preserved. Nothing in this part shall be construed to deny the exercise of an appurtenant right by the holder thereof at any time."

Scientific Investigations Report 2005-5213 at 44, Fig. 20. Thus, since it now has the benefit of these studies, the CWRM has less reason to hesitate on the basis of scientific uncertainty than in the *Waiahole* sitation.

That said, there may be instances where that standard is undermined by areas in the stream course that fail to achieve full connectivity from the stream's upper reaches to the point at which it meets the ocean. *See* Letter from D. Polhemus to the CWRM (12/125/09) at 2 (noting obstacles to full connectivity in various streams due to obstacles related to diversion structures that have to be modified to reduce entrainment or interruption of upstream and downstream migration); *see also* Section II.D.2. As such, the precautionary principle instructs CWRM to fully restore the remaining 19 streams and providing vehicles for full connectivity, through modifications of diversion structures, to all reaches of any particular stream to best guarantee upstream and downstream migration of the native species/habitats. Such connectivity, in turn, serves/meets the water needs of those gatherers/fishers who rely (or seek to rely) on those streams for traditional and customary gathering and fishing.[38] *Id.* at 2 (noting that modification of diversion structures to decrease entrainment of species attempting to migrate up and down streams into EMI ditches and tunnels, and thereby increase passage may be required in addition to the modifications to provide sufficient downstream flow).

Anything short of full restoration risks injury to the species/habitat (i.e., amphidromous) and to the exercise of Native Hawaiian traditional and customary practices by disrupting the natural. Anything less would risk injury to native Hawaiian practices by disrupting the 'maximum gains to native species habitat [that] can be realized from a minimal amount of management action" inherent in full restoration. *Id.* Pursuant to its public trust duties and the Water Code, the CWRM should be guided by

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[38] As the then-DAR Administrator Polhemus urged:

> Water diversion structures have two main effects on native amphidromous animals. First, the amount of habitat below a diversion is decreased or eliminated with the removal of water.Second, native animals are entrained by the diversion structure during their upstream and downstream migrations and eliminated from the population. The DAR recommends that stream diversions be modified to allow adequate water to pass downstream and to decrease entrainment. By following this strategy, maximum gains to native species habitat can be realized from a minimal amount of management action. Additionally, as a result native amphidromous animal migration between the ocean and the stream in each life cycle, priority is placed on restoring stream habitat and connectivity in an upstream direction, with actions undertaken at the lowermost diversion first.

the science of stream values articulated by the USGS, DAR, and CWRM staff, while also being mindful of stream hydrology considerations beyond the reach of scientific numerical standards. This includes the benefits of an IIFS that achieves connectivity from the streams' upper reaches to the sea, to allow for conditions that lead to thriving amphidromous populations of `o`opu, `ōpae, and hīhīwai, as well as marine life whose reproduction cycles depend on the discharge of adequate fresh water at the stream mouth. CWRM Staff Submittal 9; *see also* Section II.D.2.

Likewise, the seasonal IIFS previously adopted by the CWRM in 2010 should be rejected outright. Its artifice reflects a total disregard for CWRM's own staff's acknowledgement of the greater benefit of an annual IIFS to the long-term restoration and health of instream habitats for `o`opu, `ōpae, and hīhīwai in the 19 streams and, by extension, to traditional gathering practices. *Compare* CWRM Submittal (5/25/10) at 16 *with* CWRM Minutes (5/25/10) at 49. The science is irrefutable that to impose an artificial dry season on East Maui streams is to prevent native stream species from traveling up and down the stream course with the kind of fluidity that is essential for reproduction and the hallmark of thriving populations. CWRM Submittal (5/25/10) at 9. Under the current IIFS, almost no water remains in these streams during the dry season, when EMI is allowed to pirate virtually all streamflow for its diversions. For amphidromous stream animals' survival and prosperity, and for the protection and perpetuation of traditional gathering practices dependent on them, the CWRM should order the termination of any diversions from the remaining 19 streams that fail to allow full connectivity along the entire stream course all year round.

The Commission can no longer afford to adopt amended IIFS that flout the hard science or reject the minimum recommendation of its own sister agency, DAR, whose expertise they retained for this very purpose. To meet its obligation to protect the public trust placed on all waters of the State of Hawai'i, *see Waiāhole I*, 94 Hawai`i at 143, 9 P.3d at 455, and before seeking to accommodate HC&S's commercial enterprise, the Commission must first establish that no harm will come to Nā Moku as a result of A&B/EMI's diversions. This is the CWRM's express burden -- its most important job.

The farce of it all is that whether or the extent to which A&B/EMI has complied with the amended IIFS at any point in time, even at these paltry flow levels, remains

unknown because even at this late date, the CWRM – the primary guardian of the public rights at stake – has yet to ***comprehensively*** report on the outcomes of its implementation of the amended IIFS for all 27 streams pursuant to CWRM's adoption of the AMS in 2008. As Dr. James Parham underscored in addressing DAR and CWRM's delayed reporting of their monitoring efforts, completing such work, particularly for the streams subject to the novel (albeit flawed) dry season IIFS, "is fundamental to any reassessment of the IIFS" and "critical to understanding whether or not the IIFS for East Maui streams [has been] successful." Email from J. Parham to E. Yip (12/16/2014). Indeed, in the absence of such critical data and information, Nā Moku is without knowledge as to whether the amended IIFS for any of the 27 streams has any meaning at all. If the CWRM is saddled with the same concern -- not simply the lack of scientific certainty but the lack of data critical to make an informed decision when discharging its duty and burden to determine reasonable IIFSs, *see Nā Wai `Ehā*, 128 Hawai`i at 253, 287 P.3d at 155, then the public trust and precautionary principle mandate that the CWRM "begin with a presumption in favor of public use, access, and enjoyment" to protect the resource, *see Waiāhole I*, 94 Hawai`i at 142, 154, 9 P.3d at 454, 466, as is its first and primary duty. *See* Haw. Const. Art. XI, § 7; *Waiāhole I*, 94 Hawai`i at 113, 9 P.3d at 425.

2. The CWRM Should Require Protections for Assuring Adequate Stream Flow that are Timely and Reasonably Certain to Ensure Compliance with the IIFS in Accordance with *Ka Pa`akai.*

To effectively discharge its public trust duty, the CWRM must assure timely compliance with its amended IIFS to protect against the harm experienced by taro farmers seeking irrigation water, and cultural practitioners attempting to gather from streams. However, as experience has shown, the Commission has not demanded such compliance with current IIFSs.

In September 2009, for example, CWRM staff notified the Commission of EMI's apparent systematic violation of the amended IIFS for Honopou Stream at IIFS Site A (2.0 cfs or 1.29 mgd). *See* Scott Decl. ¶48; Exhibit A-145 (*CWRM Staff Briefing/Update Re: Implementation of East Maui IIFS (Sept. 24, 2009)*). Slide 20 of Exhibit A-145 reveals that on seven separate occasions between 2008-09, Honopou Stream flow at IIFS Site A fell below 2.0 cfs. *Id.* Indeed, in over 75% of all measurements taken at that IIFS

site over the one-year period from October 2008 to September 2009, EMI failed to achieve even a quarter of the flow as amended by the CWRM. *Id.* The four readings taken at the Honopou IIFS Site B for the same time period were similarly non-compliant and substantially below the IIFS of 0.72 cfs. *See* Scott Decl. ¶48; Exhibit A-145 at Slide 30 (noting that for three of those readings, the flow level failed to satisfy even 25% of the required IIFS). Nor did modifications to purportedly allow more water to bypass existing EMI diversion structures at Haiku Dam, *see* Scott Decl. ¶¶41-43; Exhibit A-146, achieve compliance, given that the one post-modification reading registered at Honopou IIFS Site A on July 20, 2009 was less than ¼ of the required IIFS (0.45 cfs vs. 2.0 cfs), *id.*, while the reading at IIFS Site B the following day met little more than ½ the required flow standard (0.39 cfs vs. 0.72 cfs). *Compare* Exhibit A-145, Slides 20 (revealing flow readings for IIFS Site A) and 24 (revealing flow readings for IIFS Site B, including readings from **July 2009**) *with* Slides 28 and 29 (revealing month of installation of metal flume over Haiku Dam from **March 2009**).

Despite these revelations, the CWRM failed to initiate enforcement proceedings to adequately protect or notify impacted downstream taro farmers like the now deceased Petitioners Beatrice Kekahuna and Marjorie Wallet, or to timely rectify the non-comformity and compel EMI to comply with the IIFSs going forward, or to recommend a higher amended IIFS.[39] Coincidentally, both Petitioners reported low flows so severe that their lo`i cracked under the dry conditions. *See* Scott Decl. ¶56; Exhibit A-147.

These nonconforming IIFS measurements were not isolated incidents; they affected multiple streams covered by CWRM's 2008 IIFS amendments.[40] As discussed *supra,* the streamflow amounts that bypass the diversion structures and have the potential to reach the Kekahuna/Wallett `ohana's lo`i are nonetheless of inadequate quantity and quality (temperature) to irrigate the cultivable Honopou lo`i area. *See* Table No. 1, *supra*

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[39] In no way should the CWRM staff interpret this statement as a claim that it intentionally tried to hide facts from Nā Moku. Rather, it is simply meant to portray the budgeting constraints impacting CWRM staff's ability to perform its duties; costs which should actually be borne by A&B/EMI, the commercial diverter.

[40] Between 2008-2009, EMI similarly violated the IIFS for Palauhulu Stream (IIFS set at 5.50 cfs) all four times the CWRM staff measured flows and found none reaching even half of the IIFS value, *see* Exhibit A-145 at Slide 55, and in 4 of 5 separate readings for Wailuanui Stream (IIFS set at 3.05 cfs). *Id.* at Slide 87. CWRM similarly failed to inform Nā Moku of these readings and violations and utterly failed to enforce the IIFS. *See id.* at Slide 89.

at 10. Ke`anae Valley taro farmers similarly report that the amended IIFS for Palauhulu Stream is inadequate to irrigate their taro crops. I. Kanoa Decl. ¶¶16-17, 19; G. Kanoa Decl. ¶¶8-11; I. Kimokeo Decl. ¶¶15-16; P. Kimokeo Decl. ¶¶20-21; Aquino Decl. ¶19; Clark Decl. ¶¶9-11.

It was bad enough that an entire year passed without any substantial relief, especially in dry spring and summer months. Now, the CWRM has allowed years to go by despite taro farmers', gatherers', and fishers' need for **timely** relief under the amended IIFS. Even this year, EMI continues to take the bulk of the stream flow in Honopou Stream to the detriment of its downstream taro farmers, gatherers, and fishers. *See* Scott Decl. ¶60; Exhibit A-148 (observing the estimated diversion of over 80% of Honopou Stream flow). The failure to expediently and firmly enforce the amended IIFS, or to make necessary adjustments pursuant to the AMS, directly impacted the daily personal lives of these farmers and practitioners. Without enforcement and access to the essential ingredient of water from streams, they could not actively and reliably engage in activities that placed food on their tables or the traditions and customs they have exercised for generations.

a. The CWRM Should Install USGS Real Time Metering of Stream Flow at Each IIFS Station to Assure Open and Transparent Accounting.

The USGS office installed various real time metering on strategic points on Honopou Stream. *See* Scott Decl. ¶¶57-59. However, the USGS discontinued those meters for a period of time due to CWRM's lack of funding. *See id.* That metering yielded important flow and temperature readings without which seriously compromise a regulator's ability to determine flow patterns and conditions in a particular area, or whether those flows are adequate to support taro growing and traditional and customary gathering practices, or whether A&B/EMI is complying with established IIFSs. *See id.* Meters strategically positioned at the intake and outflow of a lo`i complex, for example, recorded water flows and temperatures directed to and discharged from the Honopou lo`i, once farmed by Aunty Beatrice Kekahuna and Aunty Marjorie Wallett before their untimely passing. *See* Scott Decl. ¶¶27-28, Exhibit A-149; Scott Decl. ¶¶57-59; Exhibit A-150 at 1-7 (*seven graphs depicting water flow and temperature at the Honopou lo`i*

from Nov. 2008-2010). During the initial year of implementing the Honopou IIFS, Scott Decl., ¶¶33-34; Exhibit A-151, one of these meters recorded the inflow measurements (*see* Scott Decl. ¶59; Exhibit A-150 at 1, 4) and water temperatures (*see* Scott Decl. ¶59; Exhibit A-150 at 2-3) of Honopou Stream water moving to the Honopou lo`i. Simultaneously, another meter recorded temperatures of the outflows from the Honopou lo`i back to Honopou Stream (*see* Scott Decl. ¶59; Exhibit A-150 at 5, 6, and 7). This last set of water temperatures is largely *in excess of the safe 77 degree temperature* necessary for healthy taro. *See* Reppun Decl., Exhibit A at 5. *See also* CWRM Submittal (9/24/08) at 12 (verifying Beatrice Kekahuna and Lurlyn Scott's demands for more water in Honopou Stream to avoid the decline and degradation of their taro crop as a result of low flows and 82-degree flow temperatures in their Honopou lo`i).[41]

Unlike in the past, the CWRM cannot persist in delaying its responses to requests for relief of this sort. It must timely react to, and subsequently resolve, reports clearly evidencing the diversions' impacts on downstream taro farmers, gatherers, and fishers. The failure of the primary guardian of the public trust to resolve ***this*** issue now stretching ***over 13 years*** makes it all the more crucial for the CWRM to impose margins of safety that guard against future violations of Nā Moku's rights and the public trust doctrine. No more Hawaiians should die waiting for the water the law envisions being available to them to exercise their rights.

b. The CWRM Should Impose All Costs of Real Time Stream Monitoring on the Diverters in Proportion to the Amount of Water Taken from East Maui Streams.

In the past 13 years, the CWRM has allowed A&B/EMI and HC&S to escape any liability for its obligation to ensure that it has accurate diversion and system loss information to inform CWRM's decision to amend the IIFS of these 27 petitioned

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[41] The CWRM Staff Submittal (9/24/08) at 12 notes, in part:

- NHLC's Motion to Enforce (related to the BLNR Contested Case Hearing) indicates that Beatrice Kekahuna takes issue with the finding that she has adequate water; particularly her desire to open more loi in the future, thus triggering her appurtenant rights to more water.
- Oral testimony by Marjorie Wallett's daughter, Lyn Scott, indicates that Honopou Stream is diverted four times and that there is not enough water below the ditches. Their auwai is located nearly two miles below the last EMI diversion. The water is 76°F going into the auwai and 82°F going out, resulting in pythium rot of their taro crop.

streams. Consequently, the Commission has neither accurate individual measurements, nor calculations of the specific diversions from each of these streams, nor any verifiable measurements of system losses from A&B/EMI's diversion ditch system or HC&S' irrigation water storage and delivery system. The solemn legal protections afforded Nā Moku and inhabitants of the Hamakua-Ko`olau region under the State Constitution and Water Code must have teeth to implement and enforce the IIFS for the streams that make their taro growing and subsistence cultural practices possible. The cost of compliance and enforcement should not subvert those protections. Given the experiences and lessons learned from the past 13 years of inaction or inadequate actions to preserve rights protected under Haw. Const. Art. XII, §7, HRS §174C-101(c), and applicable case law, the CWRM must impose the cost of diverting, which necessarily include monitoring stream levels on diverted streams, on the diverters themselves: A&B/EMI and HC&S. *See Ka Pa`akai*, 94 Hawai`i at 45-47, 7 P.3d at 1082-84; *see also Na Wai Eha*, 128 Hawai`i at 247, 287 P.3d at 148.

c. The CWRM Should Implement Periodic Monitoring to Assure Timely Compliance With the IIFS, so Any Noncompliance is Addressed Within 30 days of Discovery.

Finally, the CWRM must assure timely compliance with the amendment of any IIFS. This has been a chronic problem from Nā Moku's perspective. Even if less than full restoration is ordered, farmers, gatherers, and fishers are entitled to reasonable, timely protection for their water needs. In short, there should be *minimal* delay once a taro farmer or a cultural gatherer/fisher indicates a need for enhanced restoration to a stream on which he/she relies to grow taro, gather from the streams, or fish near the stream mouths. The Hawai`i Constitution, Art. XII §7, HRS §174C-101, and relevant case law require it. The importance of such activities to the daily lives of those who engage in them make timely intervention to assure protection of instream uses essential.

IV. CONCLUSION

In the instant case, CWRM took eight years to hold its first public hearing on Nā Moku's petitions to amend the IIFS for the 27 streams. These IIFS proceedings are currently before the fifth Deputy Director for the CWRM. The Petitions have gone through several generations of the CWRM membership. Two of the original named

Petitioners, Aunty Beatrice Kekahuna and Marjorie Wallett, died in the interim awaiting sufficient stream flows to which they were constitutionally entitled. The CWRM and BLNR collectively have failed to resolve repeated reports by taro farmers, in varying degrees, of inadequate stream flow to irrigate their taro crops, suffering much damage to those crops and the cultural lifestyle and values kalo supports. Similarly, the failure to provide restoration to stream habitats and estuarine ecologies fed by those 27 streams over those years seriously and detrimentally affected the ability of dozens of families to supplement their diets with otherwise healthy foods that contribute immeasurably to the physiological and cultural well-being of the affected cultural practitioners who would otherwise rely on those stream flows.

Such a pattern of delay and obfuscation, regardless of any proffered financial or economic justifications, cannot stand. The diverters of this water have failed to legally justify their actions and inactions. The one common theme offered to justify the delay and dogged adherence to the status quo has been the economic impact of restoring stream flow. In truth, that consideration must take a back seat to taking the necessary steps to protecting the public trust resource and following the procedural protection mandated under *Ka Pa`akai* first. Only when these analyses are done should the CWRM consider weighing "the importance of the present or potential instream values with the importance of the present or potential uses of water for non-instream purposes, including the economic impact of restricting such uses" contemplated in HRS §174C-71(2)(D).

DATED: Honolulu, Hawai`i, December 30, 2014.

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served upon the following parties in the manner indicated at their last known address:

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